who is the daughter of F. Thus, C and E are the children of B and F. Since B is the father, so F is the mother of C and E i.e. F is the wife of B. A is the mother of F's husband i.e. A is the mother-in-law of F.

6. (c): P + R + S + Q means P is the daughter of R who is the father of S who is the father of Q i.e. P is the sister of the father (S) of Q i.e. P is the aunt of Q.

7. (a): P – R + Q means P is the wife of R who is the father of Q i.e. P is the mother of Q.

8. (d): P × R + Q means P is the brother of R who is the daughter of Q i.e. P is the son of Q.

9. (a): P x R - Q means P is the brother of R who is the wife of Q i.e. P is the brother-in-law of Q.

10. (c): P + R + Q means P is the father of R who is the daughter of Q i.e. P is the father of R and Q is the mother of R i.e. P is the husband of Q.

11. (d): P + R + Q means P is the daughter of R who is the father of Q i.e. P is the sister of Q.

12. (a): P x R + Q means P is the brother of R who is the father of Q i.e. P is the uncle of Q.

13. (c): P – R x Q means P is the wife of R who is the brother of Q i.e. P is the sister-in-law of Q.

14. (a): P + Q – R means P is the daughter of Q who is the husband of R i.e. R is the mother of P.

15. (c): P x Q + R means P is the brother of Q who is the daughter of R i.e. P is the son of R.

16. (a): P + Q x R means P is the daughter of Q who is the brother of R i.e. P is the niece of R.

17. (b): M – N x T + Z means M is the mother of N, who is the father of T, who is the daughter of Z. So, T is the daughter of N and Z. Z is the wife of N. M is the mother of N. So, M is the mother-in-law of Z and grandmother of T.

18. (b): A + B # C – D means A is the mother of B, who is the father of C, who is the brother of D, i.e., A is the mother of D's father. So, A, is D's grandmother.

19. (c): A is the aunt of E means A is the sister of the father of E i.e. A * B # E. Clearly, the code in (c) indicates the same.

20. (c): B + D x M + N means B is the mother of D who is the father of M, who, in turn, the brother of N. Thus, M is the son of D, whose mother is B i.e. M is B's grandson.

21. (e): J + R – T x F means J is the brother of R who is the sister of T who is the father of F i.e. J is the uncle of F. J + R – T x F means J is the mother of R who is the sister of T who is the father F i.e. J is the grandmother of F. J + M-N x F means J is the brother of M who is the sister of N who is the father of F i.e. J is the uncle of F. of J is son of F means F is the mother/father of J who is a male (brother of some person A) i.e. F x J + A or F +J + A.

22. (b): R is niece of M means R is the daughter of the brother or sister of M i.e M-J+R-N or M – J x R - N or M + K+ R - N or M+ K x R – N

23. (c): P @ Q $ M # T means P is the husband of Q who is the mother of M who is the father of T i.e. P is the father of T's father i.e. P is T's paternal grandfather.

24, (b): R is the sister of H means R is the daughter of the father of H i.e. R is the daughter of the husband (say D) of the mother (say F) of H i.e. R % D@ F $ H.

25. (a): F@D% K# H means F is the husband of D who is the daughter of K who is the father of H i.e. F is the husband of D who is the sister of H i.e. F is H's brother-in-law

26. (b): H is the brother of N means N is the daughter of H's father and H is a male i.e. N is the daughter of the husband (say, F) of the father (say, D) of H and H is the father or husband of some other person (say, R) i.e. N % F @ D $ H#R or N% F@D$H@R

27. (a): G $ M @ K means G is the mother of M who is the husband of K i.e. K is the wife of G's son i.e. K is G's daughter-in-law.

28. (d): R is the daughter of T means

(i) T is the mother of R who is the sister of say, B i.e. T @ R # B; or

(ii) T is the husband of the mother (say, F) of R who is the sister of say, B i.e. T $ F @ R # B; or

(iii) R is the sister of the son (say, F) of T i.e. R # F ★ T, or

(iv) R is the sister of the son (say, F) of the husband (say, B) of T i.e. R # F ★ B $ T

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29. (e): M ★ H @D $ K means M is the son of H who is the mother of D who is the husband of K i.e. H is the mother of Ks husband i.e. H is K's mother-in-law.

30. (b): F # J ★ T $ R @ L means F is the sister of J who is the son of T who is the husband of R who is the mother of L i.e. T and R are respectively the father and mother of F, J and L of whom F is female and J is male. Thus, F is the sister of each one of J and L, while J is the brother of each one of F and L.

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Chapter 6

PUZZLE TEST

This section of analytical reasoning comprises of questions put in the form of puzzles involving certain number of items, be it persons or things. The candidate is required to analyze the given information, condense it in a suitable form and answer the questions asked.

The question on Puzzle Test may be any of the following types.

1. Classification Type Questions
2. Seating/Placing Arrangements
3. Comparison Type Questions
4. Sequential Order of Things
5. Selection Based On Given Conditions
6. Family -Based Problems
7. Jumbled Problems

TYPE 1 : CLASSIFICATION TYPE QUESTIONS

This type consists of questions in which certain items belonging to different groups or possessing different qualities are given along with some clues with the help of which the candidate is required to group and analyze the given items and answer the questions accordingly.

Ex. 1. ***Study the following information carefully and answer the given questions:***

(i) B and E are good in Dramatics and Computer Science.
(ii) A and B are good in Computer Science and Physics.
(iii) A, D and C are good Yin Physics and History.
(iv) C and A are good in Physics and Mathematics.
(v) D and E are good in History and Dramatics.

1. Who is good in Physics, History and Dramatics?
   (a) A (b) B (c) D (d) E
2. Who is good in Physics, History and Mathematics, but not in Computer Science?
   (a) A (b) B (c) C (d) D
3. Who is good in Computer Science, History and Dramatics?
   (a) A (b) B (c) C (d) E
4. Who is good in History, Physics, Computer Science and Mathematics?
   (a) A (b) B (c) C (d) D
5. Who is good in Physics, Dramatics and Computer Science?
   (a) A (b) B (c) D (d) E

Sol. The given information can be analyzed

	Dramatics	Computer Sc.	Physics	History	Mathematics
A	×	✓	✓	✓	✓
B	✓	✓	✓	×	×
C	×	×	✓	✓	✓
D	✓	×	✓	✓	×
E	✓	✓	×	✓	×

1. D is good in Physics, History and Dramatics. So, the answer is (c).
2. Both A and C are good in Physics, History and Mathematics, But A is good in Computer Science, while C is not. So, the answer is (c).
3. E is good in Computer Science, History and Dramatics. Hence, the answer is (d).
4. A is good in History, Physics, Computer Science and Mathematics. Hence, the answer is (a).
5. B is good in Physics, Dramatics and Computer Science. Hence, the answer is (b).

Ex. 2. ***Read the following information carefully and answer the questions given below:***

There are six persons A, B, C, D, E and F in a school. Each of the teachers teaches two subjects, one compulsory subject and the other optional subject. D's optional subject was History while three others have it as compulsory subject. E and F have Physics as one of their subjects. F's compulsory subject is Mathematics which is an optional subject of both C and E. History and English are A's subjects but in terms

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of compulsory and optional subjects, they are just reverse of those of D's. Chemistry is an optional subject of only one of them. The only female teacher in the school has English as her compulsory subject

1. What is C's compulsory subject?
   (a) History (b) Physics (c) Chemistry
   (d) English (e) Mathematics
2. Who is a female member in the group?
   (a) A (b) B (c) C
   (d) D (e) E
3. Which of the following has same compulsory and optional subjects as those of F's?
   (a) D (b) B (c) A
   (d) C (e) None of these
4. Disregarding which is the compulsory and which is the optional subject, who has the same two subject combination as F?
   (a) A (b) B (c) E
   (d) D (e) None of these
5. Which of the following groups has History as the compulsory subject?
   (a) A, C, D (b) B, C, D (c) CD
   (d) A, B, C (e) A D

Sol. The given information can be analyzed as follows:
Let 'O' denote optional and 'C' denote compulsory.

	A	B	C	D	E	F
History	C	C	C	O	-	-
Physics	-	-	-	-	C	O
Mathematics	-	-	O	-	O	C
English	O	-	-	C	-	-
Chemistry	-	O	-	-	-	-

F's compulsory subject is Mathematics. F has Physics as one of the subjects. So, Physics is the optional subject of F.

E has Mathematics as optional and Physics as one subject. So, Physics is the compulsory subject of E.

A and D have the same subjects – History and English. D has History as optional subject and so English is the compulsory subject of D. Subjects of A and D are reverse in regard of optional and compulsory. So, A has History as compulsory subject and English as optional

Chemistry is the optional subject of only one teacher. So, it is the optional subject of B, which only remains. We know that History is the compulsory subject of three teachers.

So, it is compulsory for A, B and C.

D is the teacher having English as her compulsory subject. So, D is the only female teacher.

1. C's compulsory subject is History. So, the answer is (a).
2. D is the only female teacher. So, the answer is (d).
3. E has same subjects as those of F but the compulsory and optional subject of E are reverse of those of F. So, the answer is 'None of these' i.e. (e).
4. Clearly, E has the same subject combination as that of F. Hence, the answer is (e).
5. A, B and C have History as the compulsory subject. So, the answer is (d).

Ex 5. Study the following information carefully and answer the questions given below:

(i) Eight persons A, B, C, D, E, F, G and H work in three different companies X. Y and Z.

(ii) There are two ladies who work in different companies and their specialization is also different.

(iii) Two of them have specialization in Finance, another two have specialization in Human Resources, two have specialization in Marketing, one is engineer and one of them is specialist in Computer.

(iv) D is a specialist in Human Resource working in Company X while her friend G is a Finance specialist and works in Company Z.

(v) H is a Human Resource specialist who works with Marketing specialist B but does not work in Company Y.

(vi) The two persons with same specialization do not work together.

(vii) Marketing specialist F works in Company Y and his friend A who is Finance specialist works in Company X with only one other specialist.

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(viii) In no company more than three persons work.
(ix) C is an engineer and his sister works in Company Z.
(x) No lady is an engineer or Computer specialist.

1. In which company does C work?
   (a) X (b) Y (c) Z (d) Either Y or Z (e) None of these
2. In which two companies do Human Resource specialists work?
   (a) X and Y (b) Y and Z (c) X and Z (d) Data inadequate (e) None of these
3. The two ladies are
   (a) B and D (b) D and G (c) D and H
   (d) Either (a) or (b) (e) Data inadequate
4. Who is Computer specialist?
   (a) C (b) E (c) H
   (d) Data inadequate (e) None of these

Sol. D and H specialize in Human Resource, G and A in Finance, B and F in Marketing, C is an engineer. So, E is a Computer Specialist.
Now, H and B work together but not in Company Y. Also D and H have the same specialization. So, H does not work in the same company as Di.e. X. Thus, H and B work in Company Z. Only D and A work in Company X; G, H and B work in Company Z. Since not more than three persons work in any one company, F, C and E work in Company Y.
Since the two females work in different companies, so D being a female, the other person in Company X i.e. A is a male. F is a male. C, being an engineer and E, being a Computer specialist, are both males. Since D is a female, so the specialization of the other female cannot be the same as that of D i.e. Human Resource. So, His a male. Thus, either B or G is the other female.

Person	Sex	Specialization	Company
A	Male	Finance	X
B	Male/ Female	Marketing	Z
C	Male	Engineer	Y
D	Female	Human Resource	X
E	Male	Computer	Y
F	Male	Marketing	Y
G	Male/ Female	Finance	Z
H	Male	Human Resource	Z

1. (b): C works in Company Y.
2. (c): Human Resource specialists are D and H, who work in companies X and Z respectively.
3. (d): The two ladies are D, and either B or G.
4. (b): E is a Computer specialist.

PRACTICE EXERCISE 1

Directions (*Questions 1 to 3*): *Read the following information carefully and answer the questions given below:*

Raza and Kamal are good in Hockey and Volleyball. Shahid and Raza are good in Hockey and Baseball. Gohar and Kamal are good in Cricket and Volleyball. Shahid, Gohar and Mikail are good in Football and Baseball.

1. Who is good in Hockey Cricket and Volleyball?
   (a) Shahid (b) Kamal (c) Raza (d) Gohar
2. Who is good in Baseball, Cricket, Volleyball and Football?
   (a) Shahid (b) Kamal (c) Gohar (d) Raza
3. Who is good in Baseball, Volleyball and Hockey?
   (a) Shahid (b) Kamal (c) Raza (d) Gohar

Directions (*Questions 4-5*): *Study the following information and answer the questions given below it:*

(i) Kashif, Ghauri and Haris are intelligent.
(ii) Kashif, Rashid and Jannat are hard-working.
(iii) Rashid, Haris and Jannat are honest.
(iv) Kashif, Ghauri and Jannat are ambitious.

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4. Which of the following persons is neither hard-working nor ambitious?
(a) Kashif (b) Ghauri (c) Haris (d) Rashid
5. Which of the following persons is neither honest nor hard-working but is ambitious?
(a) Kashif (b) Ghauri (c) Rashid (d) Haris
6. Six students A, B C, D, E and F are sitting in the field. A and B are from Lahore while the rest from Bahawalpur. D and F are tall while others are short. A, C and D are girls while others are boys. Which is the tall girl from Bahawalpur?
(a) C (b) D (c) E (d) F

Directions *(Questions 7 to 9)*: Read the following information carefully and answer the questions given below:

(i) There are five types of cards viz. A, B, C, D and E. There are three cards of each type. These are to be inserted in envelopes of three colors – Red, Yellow and Brown. There are five envelopes of each color.
(ii) B, D and E type cards are inserted in red envelopes. A, B and C type cards are to be inserted in yellow envelopes and C, D and E type cards are to be inserted in brown envelopes.
(iii) Two cards each of B and D type are inserted in red envelopes.

7. Which of the following combinations of types of cards and the number of cards and color of envelope is definitely correct?
(a) A – 2, B – 2, C – 1: Yellow (b) C – 2, D – 1, E – 2: Brown (c) C-1, D-2, E-2 : Brown
(d) B – 2, D – 2, A – 1: Red (e) None of these
8. Which of the following combinations of color of the envelope and the number of cards is definitely correct in respect of E-type cards?
(a) Red - 1, Yellow – 2 (b) Yellow - 1, Brown - 2 (c) Red - 2, Brown - 1
(d) Red - 2, Yellow – 1 (e) None of these
9. Which of the following combinations of the type of cards and the number of cards is definitely correct in respect of yellow colored envelopes?
(a) A-2, E-1, D-2 (b) A-2, B-1, C-2 (c) A-3, B-1, C-1
(d) B-1, C-2, D-2 (e) None of these

Directions *(Questions 10 to 14)*: Read the following information carefully and answer the questions given below:

(i) There is a group of five persons - A, B, C, D and E.
(ii) One of them is a horticulturist, one is a physicist, one is a journalist, one is an industrialist and one is an advocate.
(iii) Three of them - A, C and advocate prefer tea to coffee and two of them - B and the journalist prefer coffee to tea.
(iv) The industrialist and D and A are friends to one another but two of them prefer coffee to tea.
(v) The horticulturist is C's brother.

10. Who is the horticulturist?
(a) A (b) B (c) C (d) D (e) E
11. Who is the industrialist?
(a) E (b) C (c) B (d) A (e) D
12. Which of the following groups includes a person who likes tea but is not an advocate?
(a) ACE (b) DE (c) BCE (d) BD (e) None of these
13. Who is a physicist?
(a) A (b) E (c) D (d) C (e) B
14. Which of the statements given above is superfluous?
(a) (iii) (b) (iv) (c) (ii) (d) (v) (e) None of these

Directions *(Questions 15 to 18)*: Study the following information carefully and answer the questions given below:

Three ladies and four men are a group of friends i.e. P, K, R, Q, J, V and X. Each one has a different profession i.e. Lawyer, Travel Agent, Air-hostess, Doctor, Professor, Consultant and Jeweller and each one owns a different car i.e. Alto, Corolla, Santro, Lancer, Ikon, Scorpio and Esteem, not necessarily in that order. None of the ladies is a Consultant or a Lawyer. R is an Air-hostess and she owns an Ikon car. P owns a Scorpio. K is not a Doctor. J is a Jeweller and he owns Corolla. V is a Lawyer and does not own Alto. X is a Consultant and owns Santro. The Doctor owns Esteem car whereas the Professor owns Scorpio. The Travel Agent owns an Alto. None of the ladies owns a Scorpio.

15. Who are the three ladies in the group?

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(a) V, R, K (b) R, P, J (c) R, K, Q
(d) Data inadequate (e) None of these

16. What car does Q own?
(a) Esteem (b) Lancer (c) Alto (d) Santro (e) None of these

17. Who owns the car Lancer?
(a) V (b) X (c) K (d) Data inadequate (e) None of these

18. What is the profession of K?
(a) Doctor (b) Professor (c) Travel Agent
(d) Data inadequate (e) None of these

Directions (Questions 19 to 23): Study the following information carefully and answer the questions given below:

A, B, C, D, E, F and G are travelling in three different vehicles. There are at least two passengers in each vehicle – I, II and III and each vehicle has passengers of both the sexes. There are two engineers, two doctors and three teachers among them. C is a lady doctor and she does not travel with the pair of sisters A and F B, a male engineer, travels with only G, a teacher in vehicle I. D is a male doctor. Two persons belonging to same profession do not travel in the same vehicle. A is not an engineer and travels in vehicle II.

19. In which vehicle does C travel?
(a) 1 (b) II (c) III (d) II or III (e) None of these

20. How many lady members are there among them?
(a) Three (b) Four (c) Three or Four (d) Data inadequate (e) None of these

21. What is F's profession?
(a) Doctor (b) Engineer (c) Teacher (d) Data inadequate (e) None of these

22. Which of the following is not correct?
(a) A- Female - Teacher (b) B. Male – Engineer (c) E-Male - Teacher
(d) F- Female – Teacher (e) G - Female - Teacher

23. Which of the following represents the three teachers?
(a) AEG (b) EFG (c) AEG or EFG
(d) Data inadequate (e) None of these

ANSWERS (EXERCISE 1)

Questions 1 to 3

The given information can be analyzed as under:

	Hockey	Volleyball	Baseball	Cricket	Football
Raza	✓	✓	✓		
Kamal	✓	✓		✓	
Shahid	✓		✓		✓
Gohar		✓	✓	✓	✓
Mikail			✓		✓

1. (b) : Kamal is good in Hockey, Cricket and Volleyball.
2. (c): Gohar is good in baseball, Cricket, Volleyball and Football.
3. (c): Raza is good in baseball, Volleyball and Hockey

Questions 4 – 5

We may prepare a table as under:

Hockey	Intelligent	Hard-working	Honest	Ambitious
Kashif	✓	✓		✓
Ghauri	✓			✓
Haris	✓		✓	
Rashid		✓	✓	
Jannat		✓	✓	

4. (c): Haris is neither hard-working nor ambitious.
5. (b): Ghauri is ambitious but neither honest nor hard-working.

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6. (b):

	Lahore	Bahawalpur	Tall	Short	Girls	Boys
A	✓			✓	✓	
B	✓			✓		✓
C		✓		✓	✓	
D		✓	✓		✓	
E		✓		✓		✓
F		✓	✓			✓

Clearly, D is the tall girl from Bahawalpur.

Questions 7 to 9

Two B-type and two D-type cards are inserted in red envelopes. Since there are five red envelopes, so only one E-type card is put in red envelope. The two remaining E-type cards and one D-type card are thus put in brown envelopes. The remaining two cards in brown envelopes are C-type. The yellow envelopes thus contain one B-type, one C-type and three A-type cards.

Envelope	Cards				
Red	B	B	D	D	E
Yellow	A	A	A	B	C
Brown	C	C	D	E	E

7. (b): There are 2 C-type, 1 D-type and 2 E-type cards in brown envelopes.
8. (e): Two E-type cards are inserted in brown envelopes and one E-type card is inserted in red envelope.
9. (c): Yellow colored envelopes contain three A-type, one B-type and one C-type cards.

Questions 10 to 14

A prefers tea. So, from (iv), the industrialist and D prefer coffee. From (iii), B and the journalist prefer coffee. So, B is the industrialist and D is the journalist. Now, A, C and advocate remain. Clearly, E is the advocate. The horticulturist is C's brother. It can be only A. C is a physicist.

	A	B	C	D	E
Profession	Horticulturist	Industrialist	Physicist	Journalist	Advocate
Preference	Tea	Coffee	Tea	Coffee	Tea

10. (a): A is the horticulturist.
11. (c): B is the industrialist.
12. (e): Clearly, A and C are the persons who like tea but are not advocates.
13. (d): C is the physicist.
14. (e): Since all the statements are required to analyze the given data, none of them is superfluous.

Questions 15 to 18

R is an Air-hostess, J is a Jeweler, V is a Lawyer, X is a Consultant. Now, R is a female, J is a male. V and X, being Lawyer and Consultant, are both males. P owns Scorpio and so is a male. Thus, only K and Q remain and since there are three ladies in the group, so K and Q are both females. Since P owns Scorpio, so P is a Professor. K is not a Doctor. So, K is a Travel Agent and owns Alto. Thus, Q is a Doctor and owns Esteem. Finally, V, the Lawyer, owns Lancer.

Person	Sex	Profession	Car
P	Male	Professor	Scorpio
K	Female	Travel Agent	Alto
R	Female	Air-hostess	Ikon
Q	Female	Doctor	Esteem
J	Male	Jeweler	Corolla
V	Male	Lawyer	Lancer
X	Male	Consultant	Santro

15. (c): K, R and Q are the three ladies in the group.
16. (a): Q owns Esteem car.
17. (a): V owns the car Lancer.

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18. (e): K is a Travel Agent by profession.

Questions 19 to 23

B, a male engineer travels with only G, a teacher in vehicle I. Since each vehicle has persons of both the sexes, so G is a female. C does not travel with A or F. Also, no person travels with any person of the same profession. Since C and D are both doctors, so C does not travel with D. Since A travels in vehicle II, so C travels with E in vehicle III. Since C is a female, so E is a male.
Thus, A, D and F travel in vehicle II. So, their professions must be different. D is a doctor. Since A is not an engineer, so A is a teacher and F is an engineer. A and F, being sisters, are both females.
B and F are two engineers, C and D are two doctors. So, A, E and G are all teachers.

Person	A	B	C	D	E	F	G
Vehicle	II	I	III	II	III	II	I
Profession	Teacher	Engineer	Doctor	Doctor	Teacher	Engineer	Teacher
Sex	Female	Male	Female	Male	Male	Female	Female

19. (c): C travels in vehicle III.
20. (b): There are four ladies in the group - A, C, F and G.
21. (b): F is an engineer by profession.
22. (d): Since F is an engineer, so F-Female-Teacher is the incorrect combination.
23. (a): A, E and G are the three teachers.

TYPE 2: SEATING/PLACING ARRANGEMENTS

In this type of questions, some clues regarding seating or placing sequence (linear or circular) of some persons or items is given. The candidate is required to form the proper sequence using these clues and answer the given questions accordingly.

Ex. 1. ***Read the following information carefully to answer the questions given below:***
Nine cricket fans are watching a match in a stadium. Seated in one row, they are J, K, L, M, N, O, P, Q and R. L is at the right of M and at third place at the right of N. K is at one end of the row. Q is seated adjacent to both O and P. O is at the third place at the left of K. J is right next to left of O.

1. Who is sitting at the center of the row?
   (a) I (b) J (c) O (d) Q
2. Who is at the other end of the row ?
   (a) J (b) N (c) P (d) R
3. Which of the following statements is true ?
   (a) N is two seats away from J.
   (b) M is at one extreme end.
   (c) R and P are neighbours.
   (d) There is one person between L and 0.

Sol. L is at the right of M and at third place at the right of N. So, the sequence becomes: N□ML. O is at third place at the left of K and J is right next to left of O i.e. JO□□K. Qis adjacent to both O and P i.e. JOQPK. Thus, the only black space left must be occupied by R i.e. NRML. Since K is at one end of the row, so the entire seating sequence becomes: NRMLJOQPK.

1. J is sitting at the centre of the row. So, the answer is (b).
2. N is at the other end of the row. So, the answer is (b).
3. Clearly, there is one person J between L and O.
   So, only (d) is true.
   Hence, the answer is (d).

Ex. 2. **Eight books are kept one over the other. Counting from the top, the second, fifth and sixth books are on Plays. Two books on Plays are between two books on Poetry while the book at the top of the book of Literature is a book of Composition. One book of Plays is between two books on One book of Plays is of Composition. Which book is fourth from the top?**
(a) Plays (b) Poetry (c) Composition (d) Literature

Sol. We analyze the given information as follows:
Let C denote Composition', P denote, 'Plays', Po denote Poetry' and L denote Literature.

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1	2	3	4	5	6	7	8
-	P	-	-	P	P	-	-
-	-	-	C	P	P	C	-
Po	P	Po	-	-	-	-	L
-	-	-	-	-	-	C	

So, the arrangement from top to bottom becomes:

1	2	3	4	5	6	7	8
Po	P	Po	C	P	P	C	L

Clearly, the fourth book from the top is on Composition. Hence, the answer is (c).

PRACTICE EXERCISE 2

1. Five persons are standing in a line. One of the two persons at the extreme ends is a professor and the other a businessman. An advocate is standing to the right of a student. An author is to the left of the businessman. The student is standing between the professor and the advocate. Counting from the left the advocate is at which place?
   (a) 1st (b) 2nd (c) 3rd (d) 5th
2. A, P, R, X, S and Z are sitting in a row. S and Z are in the center, and A and P are at the ends. R is sitting on the left of A. Then who is sitting on the right of P?
   (a) A (b) S (c) X (d) Z

Directions ***(Questions 3 to 5: Read the following information to answer the given questions:***
Seven children A, B, C, D, E, F and G are standing in a line. G is to the right of D and to the left of B. A is on the right of C. A and D have one child between them. E and B have two children between them. D and F have two children between them.

3. Who is on the extreme right?
   (a) B (b) E (c) F (d) G
4. Who is exactly in the middle?
   (a) A (b) C (c) D (d) E
5. Who is on the extreme left?
   (a) A (b) B (c) C (d) D

Directions (Questions 6 to 10): ***Study the given information carefully and answer the question that follow:***

i. A, B, C, D, E, F and G are sitting on a wall and all of them are facing east.
ii. C is on the immediate right of D.
iii. B is at the extreme end and has E as his neighbor.
iv. G is between E and F.
v. D is sitting third from the south end.

6. Who is sitting to the right of E?
   (a) A (b) C (c) D (d) F (e) None of these
7. Which of the following pairs of people are sitting at the extreme ends?
   (a) AB (b) AE (c) CB (d) FB (e) Cannot be determined
8. Name the person who should change place with C such that he gets the third place from the north end.
   (a) E (b) F (c) G (d) D (e) None of these
9. Immediately between which of the following pairs of people is D sitting
   (a) AC (b) AF (c) CE (d) CF (e) None of these
10. Which of the conditions (i) to (v) given below is not required to find out the place in which A sitting?
    (a) (i) (b) (ii) (c) (iii) (b) All are required (e) None of these

Directions ***(Questions 11 to 16) Read the following information to answer the given questions:***

i. A, B, C, D, E, F and G are playing cards sitting around a circular table
ii. D is not neighbor of C or E
iii. A is neighbor of B and C
iv. G, who is second to the left of D, is the neighbor of E and F

11. Which of the following is correct?

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(a) B is between A and D
(b) D is between F and G
(c) E is to the immediate right of G
(d) F is to the immediate left of G.

12. Which of the following has the pair with the second person sitting to the immediate right of the first person?
(a) BD (b) GF (c) EC (d) AE (e) None of these

13. Which of the following will be D's position after E and D interchange their place?
(a) Neighbour of G and C
(b) To the immediate left of C
(c) To the immediate right of F
(d) Neighbour of C and A
(e) None of these

14. What is the position of C?
(a) Second to the left of B
(b) Third to the right of F
(c) To the immediate left of A
(d) To the immediate right of E
(e) None of these

15. Which of the following has the second person sitting between the first and third persons?
(a) DAB (b) GCE (c) BCA (d) GFD (e) none of these

16. Which of the following is wrong
(a) A is to the immediate right of B
(b) B is to the immediate left of D
(c) F is between G and D
(d) E is between G and C
(e) All are correct

Directions *(Questions 17 to 21)*: *Study the following information carefully and answer the questions given below:*

All the roads of a city are either perpendicular or parallel to one another. The roads are all straight. Roads A, B, C, D and E are parallel to one another. Roads G, H, I, J, K, L and M are parallel to one another.

(i) Road A is 1 Km east of road B
(ii) Road B is ½ km west of road C
(iii) Road D is 1 km west of road E.
(iv) Road G is ½ km south of Road H.
(v) Road I is 1 km north of road J.
(vi) Road K is ½ km north of Road L.
(vii) Road K is 1 km south of road M.

17. Which is necessarily true?
(a) E and B intersect.
(b) D is 2 km west of B.
(c) D is at least 2 km west of A.
(d) M is 1.5 km north of L.
(e) I is 1 km north of L.

18. If E is between B and C, which of the following is false.
(a) D is 2 km west of A.
(b) C is less than 1.5 km from D.
(c) Distance from E to B added to distance of E to C is ½ km.
(d) E is less than 1 km from A.
(e) D is less than 1 km from B.

19. If road E is between B and C, then distance between A and D is
(a) ½ km (b) 1 km (c) 1.5 km (d) 1.5 – 2 km (e) 2 – 2.5 km

20. Which of the following possibilities would make two roads coincide?
(a) L is ½ km north of I.
(b) C is 1 km west of D.
(c) J is ½ km north of K
(d) D is ½ km east of A.
(e) E and B are ½ km apart.

21. If K is parallel to I and K is ½ km south of J and 1 km north of G, which two roads would be ½ km apart?
(a) I and K (b) J and G (c) I and G (d) J and H (e) K and J

Directions *(Questions 22 to 24)*: *Read the following information carefully and answer the questions given below:*

A, B, C, D, E, F and G are seven students in a class. They are sitting on three benches I, II and III in such a way that there are at least two of them on each bench and there is at least one girl on each bench. C, a girl student, does not sit with A, E and D, F, a boy student, sits with only B, A sits with his best friend in bench I. G sits on bench III. E is brother of C.

22. On which bench do three students sit?
(a) I (b) II (c) III (d) I or II (e) None of these

23. How many girl students are there?
(a) 3 (b) 4 (c) 3 or 4
(d) Data inadequate (e) None of these3

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24. Which of the following is a group of girls?
(a) BAC (b) BCD (c) BFC (d) CDF (e) None of these

ANSWERS (EXERCISE 2)

1. (c): The advocate is to the right of the student. Who is standing between the professor and the advocate. So, we have : professor, student, advocate.
The author is to the left, of businessman. So we have : Author, Businessman.
Since the professor and businessman are at the ends the arrangement from left to right becomes:
Professor, Student, Advocate, Author, Businessman.
Clearly, the advocate is third from the left.

2. (c): R is on the left of A i.e. R, A.
A and P are at the ends i.e. P, __, __, __, R, A.
S and Z are at the centre i.e. P, __, S, Z, R, A.
Thus, the arrangement in the row is: P, X, S, Z, R, A.

Questions 3 to 5

G is to the right of D and to the left of B i.e. D, G, B. A is on the right of C i.e. C, A.
E and B have two children between them i.e. E, D, G, B.
A and D have one child between them i.e. C, A, E, D, G, B. Since D and F have two children between them, the arrangement from left to right in the line becomes : C, A, E, D, G, B, F.

3. (c): F is on the extreme right.
4. (c): D is exactly in the middle.
5. (c): C is on the extreme left.

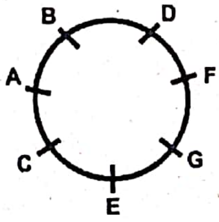
Questions 6 to 10

C is to the right of D.
D is third from south. So, B will be at the extreme end from north because it should have E as its neighbor. G is between E and F. So, the sequence is:

B →
E →
G →
F → East
D →
C →
A →

6. (e): G is sitting to the right of E.
7. (a): A and B are sitting at the extreme ends.
8. (c): G should change place with C to make it third from north.
9. (d): D is sitting between C and F.
10. (d): All the statements are required to determine the correct sequence.

Question 11 to 16



G is second to the left of D
Also, G is the neighbour of E and F i.e. G is sitting between E and F.
But D is not neighbour of E.
So, anticlockwise, we have : EGFD.
Now, A is sitting between B and C.
But D is not neighbour of C. So, B is the neighbour of D.
Thus, the seating arrangement is as sown in the adjoining figure.

11. (a): B is between A and D; D is between F and B; E is to the immediate left of G; F is to the immediate right of G.
12. (b): D sits to the immediate left of B; C sits to the immediate left of E and E sits second to the right of A. But, F sits to the immediate right of G.
13. (a): If D and E interchange places, then D's new position will be E's initial position which is between G and C.
14. (e): C's position is
(i) Second to the right of B.
(ii) Third to the left of F.
(iii) To the immediate right of A
(iv) to the immediate left of E.
15. (d): A is between C and B; C is between A and E; F is between G and D.
16. (b): B is to the immediate right of D.

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Questions 17 to 21

Clearly from statements (1) and (2), figure 1 follows; from statement (3), figure 2 follows; from statement (4), figure 3 follows; from statement (5), figure 4 follows; and from statements (6) and (7) figure 5 follows.

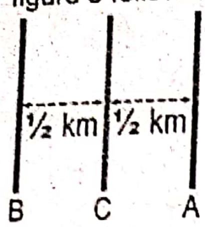


Fig. 1

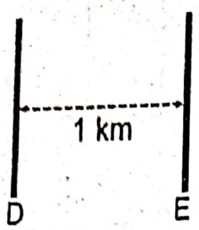


Fig. 2

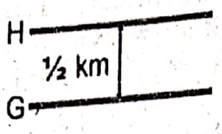


Fig. 3

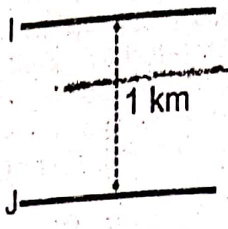


Fig. 4

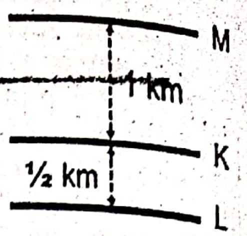
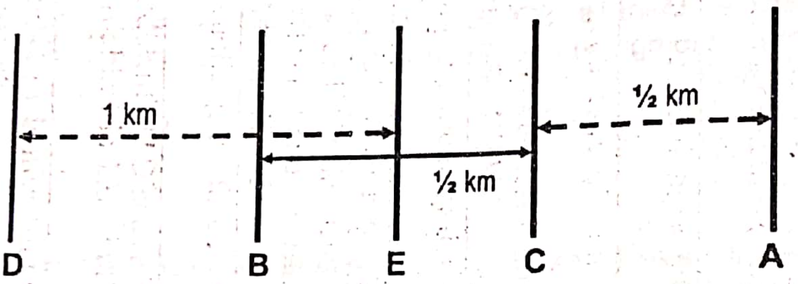


Fig. 5

17. (d): It follows from figure 5 that distance of M from L = LK + KM = ½ + 1 = 1.5 km and M is to the north of L.

18. (b): If E is between B and C, we will have the following figure:



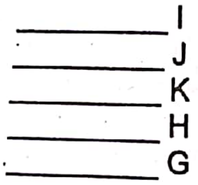
Thus, the statemt that D is 2 km west of B is false.

19. (d): From the figure in Q. 78, the distance between A and D

$= AB + ED - BE = \left(1 + 1 - \frac{1}{4}\right) = 2 - 25$ i.e. between 1.5 to 2km.

20. (e): Clearly seeing the figure in Q. 78, we find that if E and B are ½ km apart, there is a possibility that E coincides with C.

21. (e): clearly as per the information combined with figures 3 and 4, the figure is as shown. The two roads J and K, K and H, H and G are ½ km apart. So, the answer is K and J.



Question 22 to 24

F is a boy and sits with only B. since A sits on bench I and G on bench III, so B and F sits on bench II. Since there is at leat one girl on each bench, so B is a girl, C doesn't sit with A, E and D. so, C may sit with B, F and/ or G. But B and F sit togenter. So, C sits with G on bench III. Since C is a girl, so G may be a boy or a girl. Thus, the remaining 3 students – A, D and E – sits on bench I. . A is a boy, E (brother of C) is a boy. SO, D must be a girl.

22. (a): Three students – A, D and E – sit on a bench I.

23. (c): B, C and D are girls. G may or may not be a girl. So, there are 3 or 4 girls.

24. (b): B, C and D are girls.

TYPE 3 : COMPARISON TYPE QUESTIONS

In such types of questions, clues are given regarding comparisons among a set of persons or things with respect to one or more qualities. The candidate is required to analyze the whole information, from a proper ascending/ descending sequence and then answer the given questions accordingly.

Ex. 1. ***Read the following Information and answer the questions given below it:***

Amna is older than Malala. Gohar is older than Malala but younger than Amna. Khalid is younger than Rustam and Malala. Malala is older than Rustam

1. Whose age is between Gohar and Rustam?

(a) Malala (b) Khalid (c) Amna (d) None of these

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2. Whose age is between Malala and Khalid?
   (a) Gohar (b) Rustam (c) Amna (d) None of these
3. Whose age is exactly in the middle of all the five?
   (a) Malala (b) Gohar (c) Rustam (d) Amna
4. Who is the eldest?
   (a) Amna (b) Malala (c) Khalid (d) Gohar
5. Whose is the youngest?
   (a) Malala (b) Rustam (c) Amna (d) Khalid

Sol. Let us denote the five persons by the first letter of their names, namely A, M, G, K and R.
Then, $A > M$, $A > G > M$, $R > K$, $M > K$ and $M > R$.
Combining all the above, we get : $A > G > M > R > K$

1. Malala's age is between Gohar and Rustam. SO, the answer is (a)
2. Rustam's age is between Malala and Khalid. So, the answer is (b).
3. Clearly, Malala lies in the middle when all the five persons are arranged in ascending or descending order or their ages. So, the asnwer is (a).
4. Clearly, Amna is the eldest. So, the answer is (a).
5. Khalid is the youngest. So, the answer is (d).

Ex. 2. ***Read the information given below and answer the questions that follow:***
(i) There is a group of five girls.
(ii) K is second in height but younger than R.
(iii) P is taller than M but younger in age.
(iv) R and M are of the same age but R is taller between them.
(v) N is taller than P and elder to R.
(vi) K is not the youngest in the group.

1. If the girls are arranged in the ascending order of heights, who will be in third position ?
   (a) M (b) R (c) M or R
   (d) Data inadequate (e) None of these
2. If they are arranged in the descending order of their ages, who will be in fourth position ?
   (a) M or R (b) K (c) M
   (d) Data inadequate (e) None of these
3. To answer the question "who is the eldest person in the group", which of the given statements is superfluous?
   (a) Only (i) (b) Only (ii) (c) Only (vi)
   (d) Either (i) or (iv) (e) None of these

Sol: We first find the sequence of heights.
By (iii), we have : $M < P$.
By (v), we have : $P < N$.
Now, R is tallest and K is second in height.
So, the sequence of heights is : $M < P < N < K < R$.
Now, we determine the age sequence :

By (ii), we have : $K < R$.
By (iii), we have : $P < M$.
By (iv), we have : $R = M$.
By (v), we have : $R < N$.

So, the sequence of ages may be : $N > R = M > K > P$ or $N > R = M > P > K$.
But K is not the youngest.
So, the sequence of ages is : $N > R = M > K > P$.

1. Clearly, in the ascending order of heights, N is in third position. Hence, the answer is (e).
2. Clearly, in the descending order of ages, P will be in fourth position (because M and R both lie at third position). Hence, the answer is (e).
3. Clearly, to find the eldest person in the group, statement (vi) is not necessary. Hence, the answer is (c)

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PRACTICE EXERCISE 3

1. A, B, C, D and E are five friends. A is shorter than B but taller than E. C is the tallest. D is the shorter than B and taller than A. who has two persons taller and two persons shorter than him/ her?
(a) A (b) B (c) C (d) D

2. Five children were administered psychological tests to know their intellectual levels. In the report, psychologists pointed out that the child A is less intelligent than the child B. the child C is less intelligent than the child D. The child B is less intelligent than the child C and child A is more intelligent than the child E. Which child is the most intelligent?
(a) A (b) B (c) D (d) E (e) None of these

3. In a shop, there were 4 dolls of different heights A, B, C and D. D is neither as tall as A nor as short as C. B is shorter than D but taller than C. If Munir wants to purchase the tallest doll, which one should she purchase?
(a) Only A (b) Only D (c) Either or D
(d) Either B or D (e) None of these

4. If (i) P is taller than Q, (ii) R is shorter than P, (iii) S is taller than T but shorter than Q, then who among them is the tallest?
(a) P (b) Q (c) S (d) T

5. G in taller than S but not taller than R. R and T are of the same height. G is shorter than A. Amongst all the girls, who is the shortest?
(a) A (b) R and T (c) G (d) S

6. A is elder to B while C and D are elder to E who lies between A and C. If C be elder to B, which one of the following statements is necessarily true?
(a) A is elder to C (b) C is elder to D
(c) D is elder to C (d) E is elder to B

Directions *(Questions 7 to 11)*: *Read the following information and answer the questions given below it:*

i. Seven students P, Q, R, S, T, U and V take a series of tests.
ii. No two students get similar marks
iii. V always scores more than P.
iv. P always score more than Q.
v. Each time either R scores the highest and T gets the least, or alternatively S scores the highest and U or Q scores the least.

7. If S is ranked sixth and Q is ranked fifth, which of the following can be true?
(a) V is ranked first or fourth. (b) R is ranked second or third. (c) P is ranked second or fifth.
(d) U is ranked third or fourth. (e) T is ranked fourth or fifth.

8. If R gets most, V should be ranked not lower than
(a) Second (b) third (c) fourth (d) fifth (e) sixth

9. If R is ranked second and Q is ranked fifth, which of the following must be true?
(a) S is ranked third. (b) T is ranked sixth. (c) P is ranked sixth.
(d) V is ranked fourth. (e) U is ranked sixth.

10. If S is ranked second, which of the following can be true?
(a) U gets more than V. (b) V gets more than S. (c) P gets more than R.
(d) P gets more than V. (e) T gets more than Q.

11. If V is ranked fifth, which of the following must be true?
(a) S scores the highest. (b) R is ranked second. (c) T is ranked third.
(d) Q is ranked fourth. (e) U scores the least.

Directions *(Questions 12 to 16)*: *Study the following information carefully to answer these questions:*

B, D, H, K, P, R and T are seven friends who studied in three management institutes X, Y and Z. They had opted for one out of the three specializations - Marketing, Finance and Personnel with at least two of them in each specialization. No two persons have the same combination of institute and specialization. The Marketing specialist from institute Y earns the maximum. D studied in institute Z with Personnel specialization and earns more than only B and K. H studied in institute X with Marketing and earns less than only P and T. R studied in institute Z with Finance and earns more than D but less than H. T studied

in Institute X with Finance specialization. K, a Personnel specialist, studied in Institute Y and is not the least earner among them. B is the only Finance specialist from one of these institutes among them.

12. In which of the Institutes did B study?
    (a) X (b) Y (c) Z (d) Y or Z (e) Data inadequate
13. What is P's specialization?
    (a) Personnel (b) Marketing (c) Finance
    (d) Data inadequate (e) None of these
14. Which of the following combinations of institute - individual - specialization is not correct?
    (a) X-K- Personnel (b) X-H - Marketing (c) Y-B-Finance
    (d) Z-R- Finance (e) None of these
15. Whose income is the second highest among them?
    (a) T (b) H (c) P (d) P or T (e) None of these
16. How many of them earn more than D?
    (a) One (b) Two (c) Three (d) Five (e) None of these

Directions (Questions 17 to 21): Study the following information carefully and answer the questions given below:

There are seven students - A, B, C, D, E, F and G- in a class. Each of them has a different favorite subject - English, Mathematics, Physics, Chemistry, Biology, Sociology and Philosophy. Each of the students secured different marks in the examination. C has secured second highest marks and neither English nor Mathematics is his favorite subject. E secured the least marks and neither Sociology nor Mathematics is his favorite subject. The favorite subject of D is Physics and he secured more marks than B and G but less than A. The favorite subject of B is Biology and his marks are more than the marks of E but less than the marks of G: The favorite subject of A is Philosophy. The student, whose favorite subject is Chemistry, got the highest marks.

17. Chemistry is the favorite subject of
    (a) A (b) C (c) F
    (d) G (e) None of these
18. Which is the favorite subject of E?
    (a) English (b) Mathematics (c) Biology
    (d) Data inadequate (e) None of these
19. When all the seven students are arranged according to their marks in descending order, what is the position of A from the top?
    (a) Second (b) Third (c) Fourth
    (d) Data inadequate (e) None of these
20. What is the favorite subject of G?
    (a) Mathematics (b) Sociology (c) Either Mathematics or Sociology
    (d) Data inadequate (e) None of these
21. Who got the second least marks?
    (a) C (b) D (c) G
    (d) Data inadequate (e) None of these

ANSWERS (EXERCISE 3)

1. (d): We have : E < A < B, A < D < B.
Since C is the tallest, so we have: E < A < D < B < C.
Clearly, D lies in the middle.

2. (c): We have : A < B, C < D, B < C and E < A.
So, the sequence becomes : E < A < B < C < D.
Clearly, child D is the most intelligent.

3. (a): D is not as tall as A ⇒ D is shorter than A ⇒ D < A.
B is shorter than D but taller than C ⇒ C < B < D.
Thus, we have : C < B < D < A. So, A is the tallest.

4. (a): We have : P > Q, P > R, Q > S > T.
Thus P > Q > S > T and P > R.
Clearly, p is taller than each one of Q, R, S and T. So, P is the tallest.

5. (d): Let the first letter of the name of each girl represent her height. Then,
G is taller than S ⇒ G > S.
G is not taller than R ⇒ R ≥ G.
R and Tanya are of the same height ⇒ R = T

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G is shorter than A ⇒ A > G
All the above indicate that G is either shorter than or equal in height to each of the girls except S, while S is shorter than G. Thus, S is the Shortest.

6. (d): In terms of age, we have : B > A, E < C, E < D, B < C
Since E lies between A and C, the sequence becomes:
B < A < E < C < D or B < A < E < D < C.

7. (d): If S is ranked sixth and Q is ranked fifth, we have:
□ > □ > □ > □ > Q > S > □
In this case, R will rank the highest and thus T will rank the least.
Thus, we have: R > □ > □ > □ > Q > S > T
Also, the order V > P > Q will be maintained i.e V and P will have second, third or fourth places.
So, statements (a), (b), (c) and (e) cannot follow. Thus, (d) is the answer.

8. (c): If R ranks highest, T ranks lowest and occupies seventh place. Since V always ranks above P and Q, so in the maximum, P and Q will occupy fifth and sixth places. Thus, V will not rank lower than fourth.

9. (b): If R is ranked second, S will rank first and Q or U lowest. But Q ranks fifth. So, U ranks lowest.
Also, the older V > P > Q will be followed.
So, the arrangement will be S > R > V > P > Q > □ > U.
Thus, the sixth place will be occupied by T.

10. (a): If S ranks second, R ranks first and T ranks lowest. The older V > P > Q will be followed. So, the arrangement will be R > S > □ > □ > □ > □ > T. .
Clearly, statements (b), (c), (d) and (e) cannot follow. So, the answer is (a).

11. (a): If V ranks fifth, P and Q coming before V will occupy sixth and seventh places respectively i.e., Q ranks least. So, S will score the highest.

Questions 12 to 16.

We are given the following

Person	Institute	Specialization
D	Z	Personnel
H	X	Marketing
R	Z	Finance
T	X	Finance
K	Y	Personnel
B	-	Finance

Now, the marketing specialist from institute Y ears the maximum. Clearly, this is none of B, D, H, K, R and T. So, P is a Marketing specialist from institute Y and earns the maximum. Also, R is a Finance specialist from institute Z and T is a Finance specialist from institute X.
So, B is a Finance specialist from institute Y. Thus, we have:

Person	Institute	Specialization
P	Y	Marketing
B	Y	Finance

12. (b): B studied in institute Y.
13. (b): P specialized in Marketing.
14. (a): K specialized in Personnel from institute Y.
15. (a): T's income is the second highest.
16. (e): Four Persons – P, T, H and R – earns more than D.

Questions 17 to 21.

A has Philosophy, B has Biology and D has Physics as his favorite subject. Now, neither English nor Mathematics is C's favorite subject. Since C got second highest marks, so his favorite subject cannot be Chemistry also. So, C's favorite subject is Sociology. E's favorite subject is neither sociology nor mathematics. Also, E got the least marks and so his favorite subject cannot be Chemistry. So, E's favorite subject is English.

In terms of marks obtained, it is given that:
D > B, D > G, A > D, B > E, G > B.
Thus, we have : A > D > G > B > E
Clearly, G did not get the highest marks. So F's favorite subject is chemistry and G's favorite subject is Mathematics.
Hence, F got the highest and C got the second highest marks.

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Thus, the older of marks obtained becomes: F > C > A > D > G > B > E

17. (c): Chemistry is the favorite subject of F.
18. (a): E's favorite subject is English.
19. (b): Clearly, in the descending order of marks obtained. A stood third.
20. (a): G's favorite subject is Mathematics.
21. (e): B got the second least marks.

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Chapter 7

LOGICAL VENN DIAGRAMS

TYPE 1

This section deals with questions which aim at analyzing a candidate's ability to relate a certain given group of items and illustrate it diagrammatically.
Here are a few different types of Venn diagrams with their implications made clear.
Suppose you are given a group of three items. Then,

1. If the items evidently belong to three different groups, the Venn diagram representing it would be as shown alongside.
   Ex. Doctors, Engineers, Lawyers
   These three items bear no relationship to each other. So they are represented by 3 disjoint figures as shown in Fig. 1.

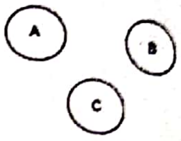

Fig. 1

2. If one item belongs to the class of the second and the second belongs to the class of third, then they representation is in the form of three concentric circles, as shown in Fig. 2.
   Ex. Seconds, Minutes, Hours
   Clearly, seconds are a part of minutes and minutes are a part of hours. So, the Venn diagram would be as shown in the adjoining figure with circle A representing Seconds, circle B representing Minutes and circle C representing Hours.

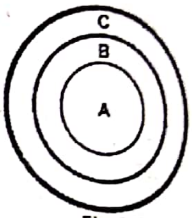

Fig. 2

3. If two separate items belong to the class of the third, they are represented by two disjoint circles inside a bigger circle as shown in Fig. 3.
   Ex. Table, Chair, Furniture
   Clearly, table and chair are separate items but both are items of furniture. So, they would be represented as in the adjoining figure with circle A representing Table, circle B representing Chair and circle C representing m Furniture.

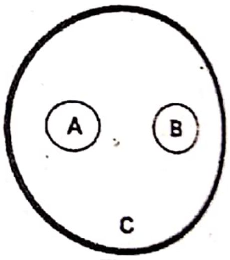

Fig. 3

4. If two items belong to the class of the third such that some items of each of these two groups are common in relationship, then they are represented by two intersecting circles enclosed within a bigger circle.
   Ex. Males, Fathers, Brothers
   Clearly, some fathers may be brothers and vice-versa. So, fathers and brothers would be represented by two intersecting circles. Also both fathers and brothers are males. So, the diagrammatic representation would be as shown in Fig. 4, with circle A representing Fathers, circle B representing Brothers and circle C representing Males.

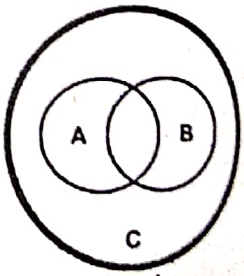

Fig. 4

5. If two items are partly related to the third, and are themselves independent of each other they are represented by three intersecting circles in a line.
   Ex. Dogs, Pets, Cats

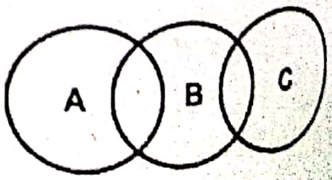

Fig. 5

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Clearly, some dogs and some cats are pets. But all the pets are not dogs or cats. Also dogs and cats are not related to each other. So, the given items would be represented as shown in Fig. 5 with circle A representing *Dogs*, circle B representing *Pets* and circle C representing *Cats*.

6. If the three items are partly related to each other, they are represented as shown in the adjoining figure.

Ex. Clerks, Government Employees, Educated Persons

Clearly, some clerks may be government employees and some may be educated. Similarly, some government employees may be clerks and some may be educated. Also, some educated persons may be clerks and some may be government employees. So, the given items may be represented as shown in Fig. 6 with three intersecting circles denoting the three classes.

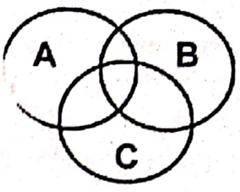


Fig. 6

7. If one item belongs to the class of second while third item is entirely different from the two, then they may be represented by the adjoining diagram.

Ex. Engineers, Human Beings, Rats

Clearly, all engineers are human beings. This would be represented by two concentric circles. But the class of rats is entirely different from these two. Thus, these items would be represented as shown in Fig. 7 with circle A representing Engineers, circle B representing Human Beings and circle C representing Rats.

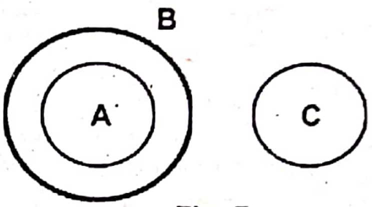


Fig. 7

8. If one item belongs to the class of second and the third item is partly related to these two, they are represented as shown alongside.

Ex. Females, Mothers, Doctors

Clearly, all mothers are females. This would be represented by two concentric circles. But, some females and some mothers can be doctors. So, the circle representing doctors would intersect each of the two concentric circles. Thus, the diagram becomes as shown in Fig. 8 with circle A representing *Mothers*, circle B representing *Females* and circle C representing *Doctors*.

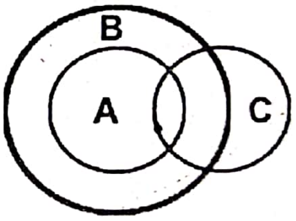


Fig. 8

9. If one item belongs to the class of second and the third item is partly related to the second, they are represented as shown alongside.

Ex. Males, Fathers, Children

Clearly, all fathers are males. This would be represented by two concentric circles. But, some males are children. But, children cannot be fathers. Thus, the diagram becomes as shown in Fig. 9 with circle A representing *Fathers*, circle B representing *Males* and circle C representing *Children*.

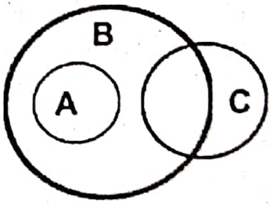


Fig. 9

10. If two items are partly related to each other and the third item is entirely different from the two, they are represented as shown alongside.

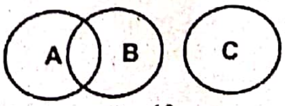


Fig. 10

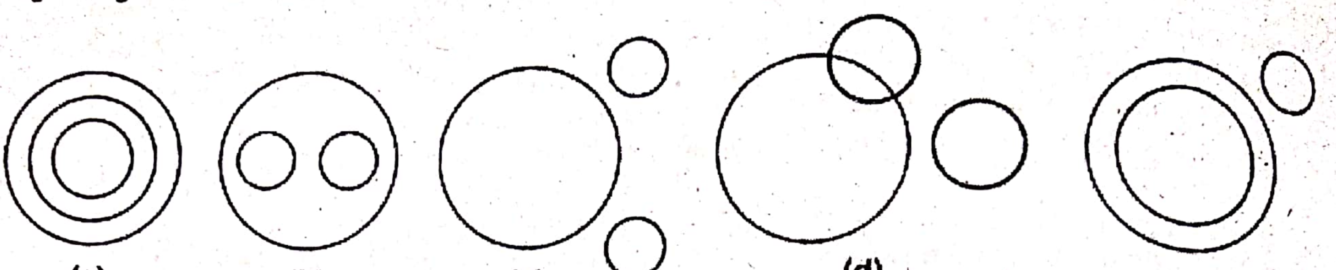
Ex. Professor, Author, Children

Clearly, some professors can be authors and vice versa. This would be represented by two intersecting circles. But the class of children would be entirely different from these two. Thus, the

venn diagram would be as shown in Fig. 10 with Circle A representing *Professors*, Circle B representing *Authors* and circle C representing *Children*.

PRACTICE EXERCISE 1

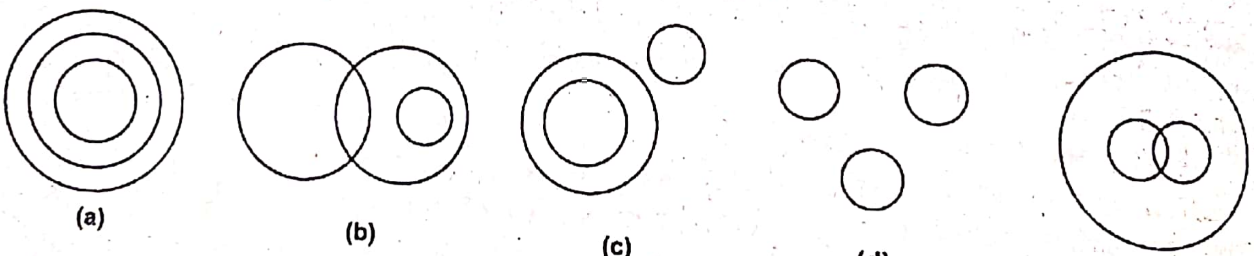
Directions (questions 1 to 10): Each of the questions below contains three elements. These three elements may or may not have some linkage. Each group of the elements may fit into one of the diagrams at (a)), (b), (c), (d) and (e). You have to indicate groups of elements in each of the questions fit into which of the diagrams given below. The letter indicating the diagram is the answer.



(a) (b) (c) (d) (e)

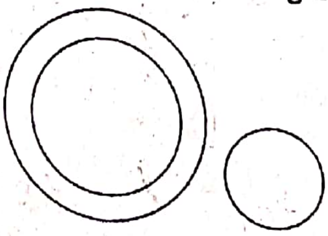
1. Vegetable, Potato, Cabbage.
2. Table, Chair, Furniture
3. Week, Day, Year
4. Judge, Thief, Criminal
5. Husband, Wife, Family
6. Square, Rectangle, Polygon
7. Bus, Car, Vehicle
8. Anxiety, intelligence, Strength
9. House, Bedroom, Bathroom
10. Mustard, Barley, Potato

Directions *(Questions 11 to 15): Given below are five possible membership schemes. In each case, mark the one you feel appropriate description of the three listed items.*



(a) (b) (c) (d) (e)

11. Apple, Golden apples, Fruits
12. Triangles, Scalene triangles, Right-angled triangles
13. World with no vowel, words with one vowel, Words with two vowels.
14. Words with no vowel, Words with at most one vowel, Words with at least two vowels.
15. Names beginning with a vowel, Names beginning with E, Names beginning with either A or P.
16. Which of the following sets is best represented in the given diagram?



(a) Animals, insects, cockroaches.
(b) Animals, males, females. And Hermaphrodites.
(c) States, Districts, Union, Territories
(d) Country, State, Districts

17. In a dinner party both fish and meat were served. Some took only fish and some only meat. There were some vegetarians who did not accept either. The rest accepted both fish and meat. Which of the following logic diagrams correctly reflects this situation?

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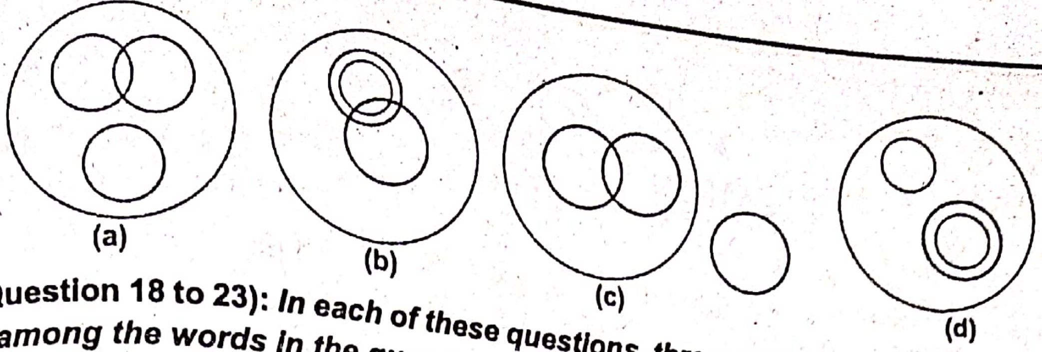
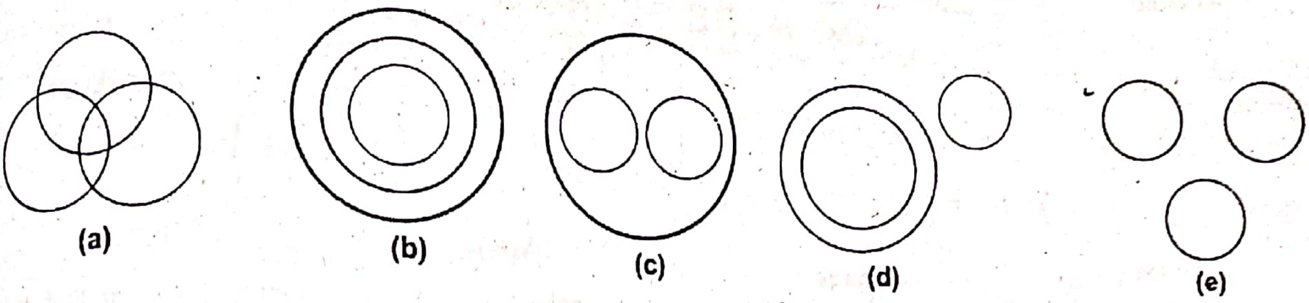
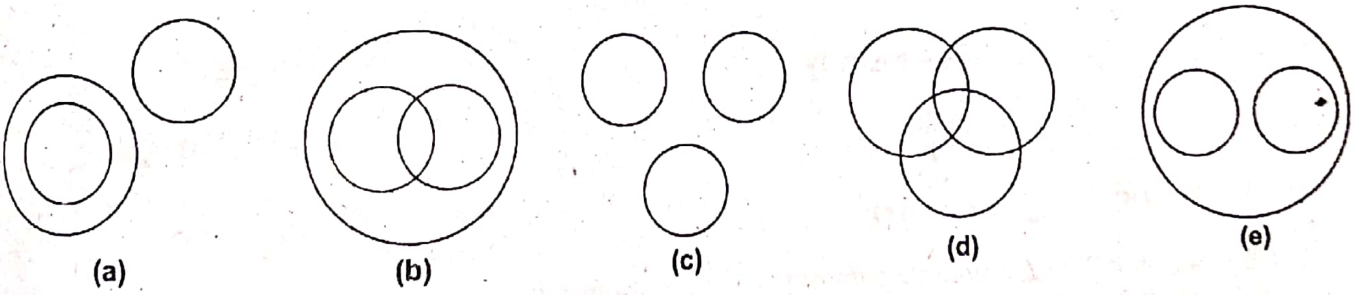


Directions (Question 18 to 23): *In each of these questions, three words are related in some way. The relationship among the words in the question can best be represented by one of the five diagrams (a), (b), (c), (d) and e given below. Mark your answer accordingly.*



18. Teacher, College, Student.
19. Cabinet, Home Minister, Minister
20. Parents, Mother, Father.
21. Elephant, Carnivore, Tiger
22. Rice, Mustard, Beetroot
23. Indoor Games, Chess, Table

Directions *(Questions 24 to 33): Choose the Venn diagram which best illustrates the three given classes in each question:*



24. Machine, Lathe, Mathematics
25. Citizens, Educated, Men
26. Honesty, Intelligence, Aptitude
27. Sun, Moon, Stars
28. Animals, Men, Plants
29. Mercury, Mars, Planets
30. Yak, Zebra, Deer
31. Water, Atmosphere, Hydrogen
32. Disease, Leprosy, Scurvy
33. Doctors, lawyers, Professionals

Directions *(Questions 34 to37): Given below are five patterns represented by circles A, B and C which indicate the logical relationship between and among the respective descriptions. On the basis of description given for A, B and c respectively in the questions, decide which of the given patterns (a), (b), (c), (d) and (e) best indicates the logical relationship.*

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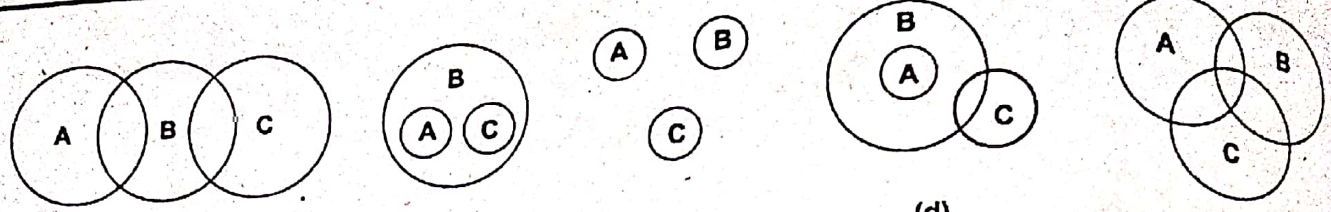
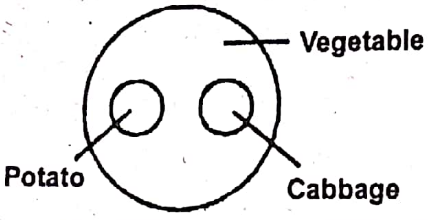


(a) (b) (c) (d) (d)

34. (A) Doctor (B) Male (C) Actor
35. (A) Rose (B) Flower (C) Lotus
36. (A) Father (B) Mother (C) Child
37. (A) Gold (B) Ornament (C) Silver

ANSWERS EXERCISE

1. (b):



Potato and Cabbage are entirely different. But, both are vegetables.

2. (b):

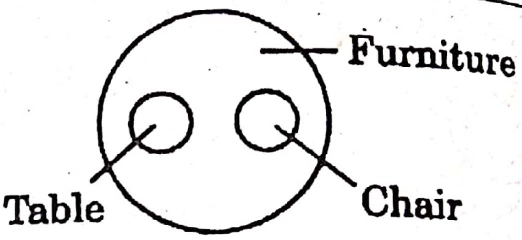


Table and *chair* are entirely different. But, both are items of *furniture.*

3. (a):

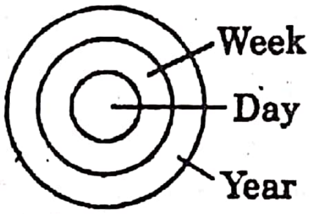
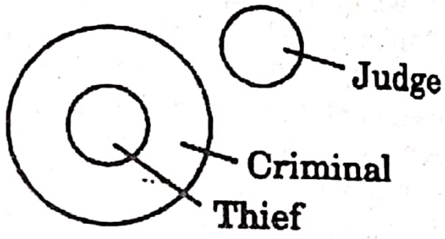


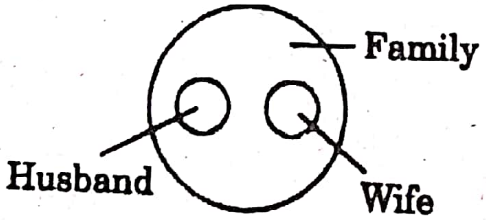
Table and *chair* are entirely different. But, both are items of *furniture.*

4. (e):



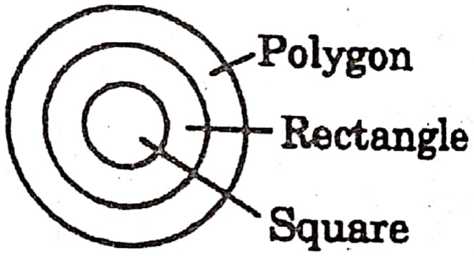
all *thieves* are *criminals.* But *judge* is different.

5. (b):



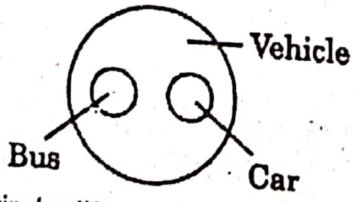
Husband and wife are entirely different. But, both are parts of a family.

6. (a):



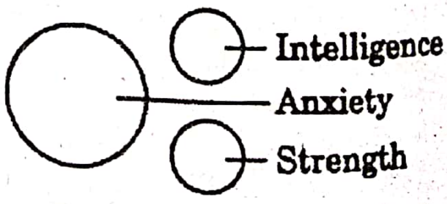
All *squares are rectangles.* All *rectangles* are *polygons.*

7. (b):



Bus and *Car* are entirely different. But, bot are *vehicles.*

8. (c):



Anxiety, Intelligence and *Strength* are entirely different from each other.

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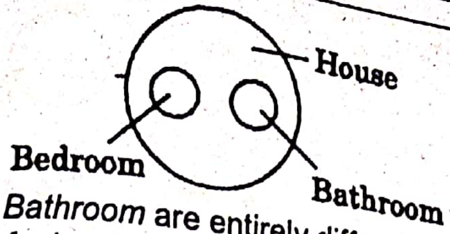
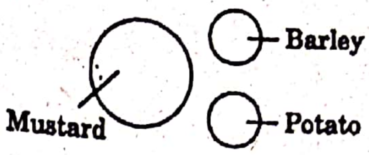
9. (b):



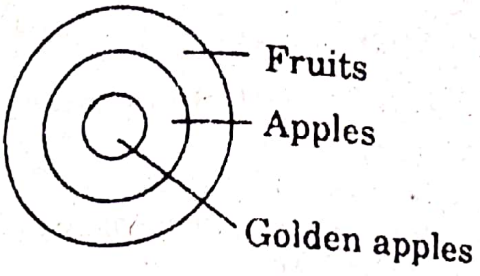
Bedroom and *Bathroom* are entirely different. But, bot are parts of a house.

10. (c):



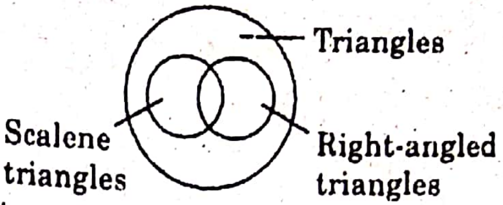
Mustard, Barley and *Potato* are all separate items, entirely different from each other.

11. (a):



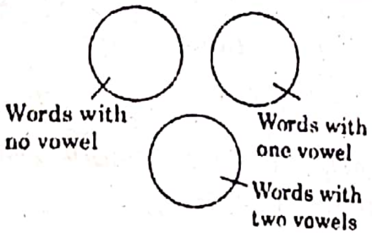
All golden *apples* are *apples*. All apples are *fruits*.

12. (e):



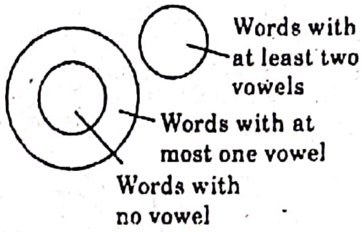
Both *scalene triangles* and *rightangled traiangles* are *triangles*.
But, some *scalene triangles* may be *right-angled* and vice-versa.

13. (d):

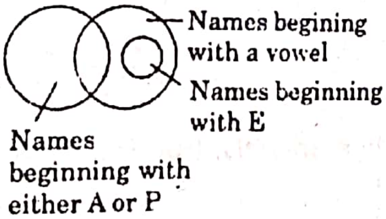


The given items are all entirely different from each other

14. (c):

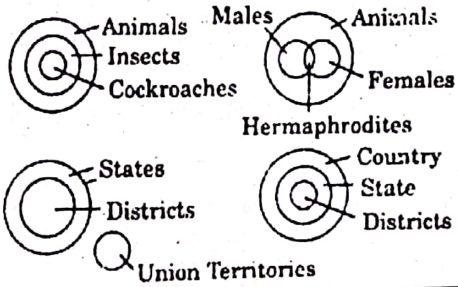


15. (b):

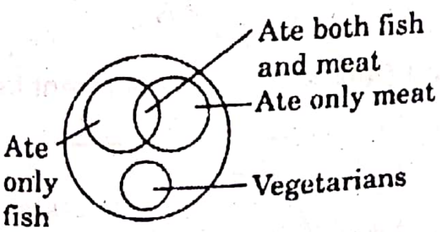


Names beginning with A shall be a part of *names beginning with a vowel.* But, *names beginning with P* shall be different

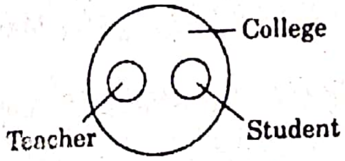
16. (c):



17. (a):



18. (c):

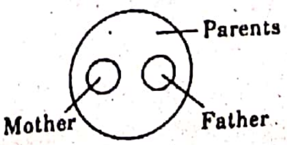


Teacher and *Student* are entirely different. But, both are parts of *College*.

19. (b)

Home Minister is a *minister*. *Minister* is a part of Cabinet

20. (c):



Mother and *Father* are entirely different. But, bot are parents.

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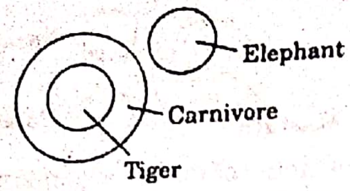
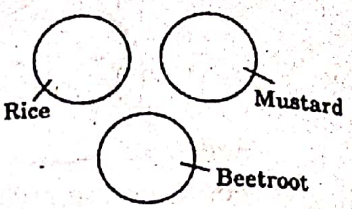
21. (d)



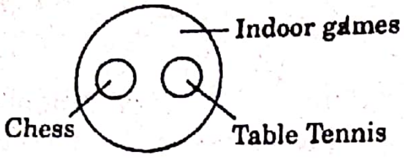
Tiger is a *carnivore*, while *elephant* is not

22. (e):



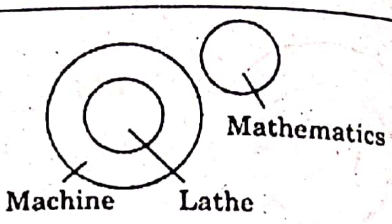
Rice, Mustard and *Beeroot* are entirely different frome ach other.

23. (c):



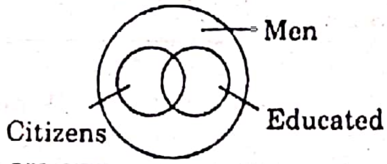
Chess and *Table Tennis* are entirely different. But both are *Indoor games.*

24. (a):



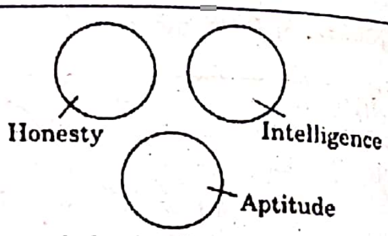
Lathe is a type of *machine.* But, *mathematics* is entirely different from the two.

25. (b):



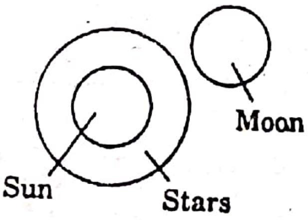
Some *educated are* citizens. *Some* citizens *are educated.* But, both *educated* and *citizens* are men

26. (c):



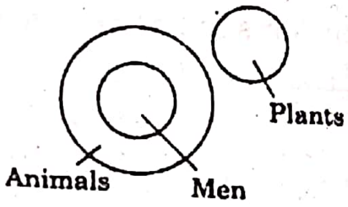
Honesty, Intelligence and *Aptitude* are entirely different from each other.

27. (a):



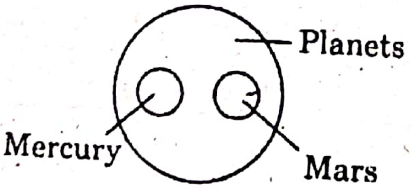
Sun is *a star.* But, *moon* is entirely different.

28.(a):



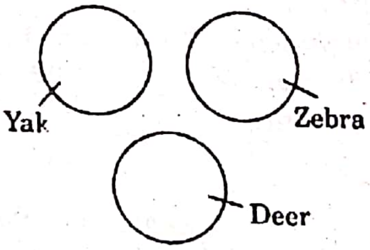
All *men* are *animals.* But, *Plants* is entirey different.

29.(e):



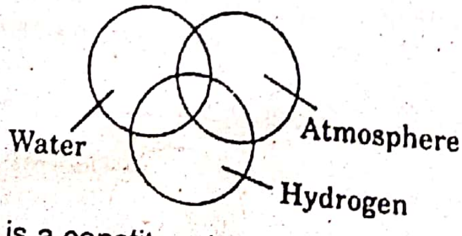
Mercury and *Mars* are entirely different. But, both are *planets.*

30.(c):



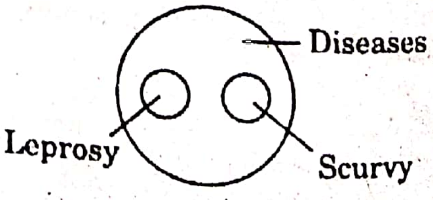
Yak, Zebra and *Deer* are entirely different from each other.

31.(d):



Hydrogen is a constituent of both *water* and *atmosphere. Water* is present in *atmosphere.*

32.(e):



Leprosy and *Scurvy* are entirely different. But, both are *diseases.*

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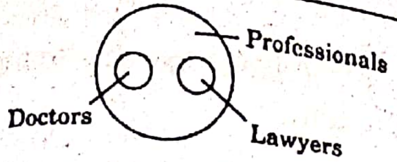
33.(e):



Doctors and *Lawyers* are entirely different. But, both are *professionals*.

All *plums* are *fruits*. But, tomatoes is entirely different.

34. (a): Some doctors and some actors are males. But, doctors and Actors are entirely different.
35. (b): Both Rose and Lotus are flowers. But, Rose and Lotus are entirely different.
36. (c): Father, Mother, and child are entirely different.
37. (a): Some Ornaments are made of Gold and Some of Silver. Gold and Silver are entirely different

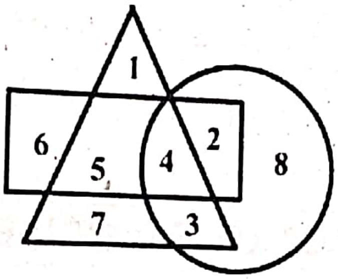
TYPE 2

In this type of questions, generally a Venn diagram is given. Each geometrical figure in the diagram represents a certain class. The candidate is required to study and analyse the figure carefully and then answer certain questions regarding the given data.

ILLUSTRATIVE EXAMPLES

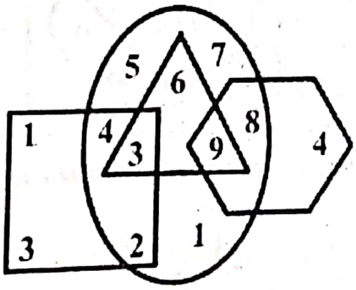
Example 2: Which number is in all geometrical figures?:

(a) 3 (b) 4 (c) 5 (d) 8



Sol. Clearly, we have to find a number which lies inside the triangle, the rectangle and the circle, which is 4. Hence, the answer is (b)

Example 2: Study the figure given below carefully and answer the questions that follow:



1. Which number belongs to all the figures?
   (a) 3 (b) 4 (c) 6 (d) none of these
2. What is the sum of the numbers which belongs to two figures only?
   (a) 6 (b) 15 (c) 20 (d) none of these
3. What is the product of the numbers which belong to three figures only?
   (a) 27 (b) 162 (c) 648 (d) none of these
4. What is the sum of the numbers which belong to one figure only?
   (a) 5 (b) 16 (c) 21 (d) none of these
5. What is the product of the numbers which belong to two figures only?
   (a) 64 (b) 192 (c) 384 (d) none of these

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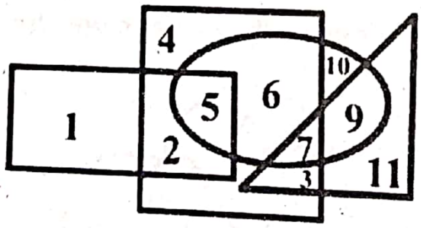
Solution

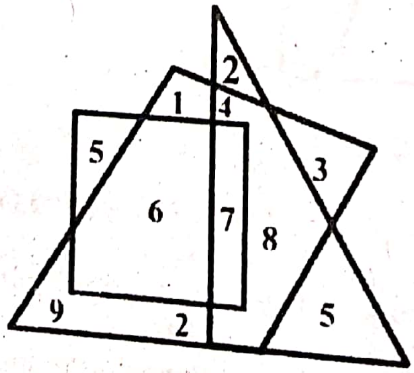
1. Clearly, we have to find a number which lies inside each one of the four figures – triangle, square, oval and hexagon. There is no such number in the given diagram.
   Hence, the answer is (d).
2. We first find the numbers which belong to two figures only, as follows:
   Numbers common to square and oval: 2, 4
   Numbers common to t triangle and oval: 6.
   Numbers common to hexagon and oval: 8.
   The numbers common to square and triangle i.e. 3 or triangle and hexagon i.e. 9 lie inside the oval also, and hence none of them shall be considered here.
   ∴ Required sum = (2 + 4 + 6 + 8) = 20
   Hence, the answer is (c).
3. We first find the numbers which belong to three figures only, as follows:
   Number common to square, triangle and oval: 3.
   Numbers common to triangle, hexagon and oval:9
   ∴ Required product = 3 x 9 = 27.
   Hence, the answer is (a)
4. We first find the numbers which belong to one figure only, as follows:
   Numbers inside the square only: 1,3.
   Numbers inside the oval only: 1, 5, 7.
   Numbers inside hexagon only: 4.
   ∴ Required sub = (1 + 3 + 1 + 5 + 7 + 4) = 21
   Hence, the answer is (c).
5. We first find the numbers which belong to figures only, as in Q.2 above.
   Clearly, such numbers are 2, 4, 6, 8.
   ∴ Required product = (2 x 4 x 6 x 8) = 384.
   Hence, the answer is (c)

PRACTICE EXERCISE 2

1. Which number is in the square, ellipse and triangle?



Directions ***(Questions 2 to 5): these questions are based on the diagrams given below:***



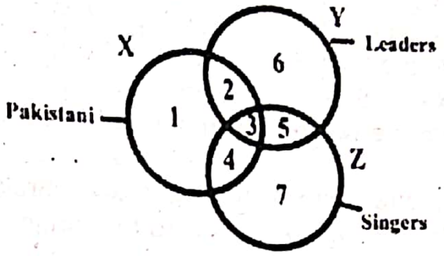
2. Which number is inside all the three figures?
   (a) 2 (b) 6 (c) 7 (d) 8

3. What is the sum of the numbers which belong to two figures only?
(a) 10 (b) 14 (c) 18 (d) none of these

4. Multiply the number which belongs to the square only with the sum of the numbers which belong to the trapezium only. What is the result?
(a) 45 (b) 60 (c) 75 (d) none of these

5. Multiply the numbers which belongs to all the three figures with the sum of the numbers which belongs to the triangle only. What is the result?
(a) 14 (b) 35 (c) 49 (d) none of these

Directions (Questions 6 to 10): Study the following figure carefully and answer the given questions:



6. Which region denotes Pakistani leaders who are not singers?
(a) 2 (b) 3 (c) 4 (d) 5

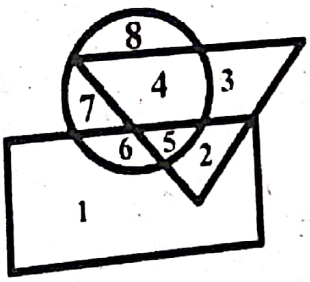
7. Which region represents Pakistani leaders who are singers?
(a) 2 (b) 3 (c) 4 (d) 5

8. Which region represents leaders who are neither singers nor Pakistani?
(a) 2 (b) 3 (c) 6 (d) 7

9. Which region represents Pakistani singers who are not leaders?
(a) 1 (b) 2 (c) 3 (d) 4

10. Which region represents singers who are neither Pakistani nor leaders?
(a) 2 (b) 4 (c) 6 (d) 7

Directions (Questions 11 to 15): In the following questions, answers are to be based on the diagram given below, where the triangle represents doctors, the circle represents players and the rectangle represents artists.



11. Which numbered space in the diagram represents doctors who are also players and artists?
(a) 2 (b) 3 (c) 4 (d) 5

12. Which number represents artists who are also players only?
(a) 4 (b) 6 (c) 7 (d) 8

13. Which number represents artists who are neither players nor doctors?
(a) 1 (b) 2 (c) 3 (d) 4

14. Which number represents doctors who are neither players nor artists?
(a) 2 (b) 3 (c) 4 (d) 5

15. Which number represent players who are neither artists nor doctors?
(a) 1, 2 (b) 3,4 (c) 6,7 (d) 7,8

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ANSWERS (EXERCISE 2)

1. (d): The number common to the square, ellipse and triangle is 7.
2. (c): Clearly, 7 lies inside the square, trapezium and triangle.
3. (c): Numbers common to square and trapezium: 6.
Numbers common to trapezium and triangle: 4, 8.
The number common to square and triangle i.e. 7 also lies inside the trapezium. So, it is not to be considered.
∴ Required sum = (6 + 4 + 8) = 18.
4. (c): Number which belongs to the square only: 5.
Numbers which belongs to the trapezium only: 1, 3, 9, 2.
∴ Required product = 5 x (1 + 3+ 9 + 2) = (5 x 15) = 75.
5. (c): Number which belongs to all the three figures: 7.
Number which belongs to the triangle only: 2, 5.
∴ Required product = 7 x (2 + 5) – (7 x 7) = 49.
6. (a): The required region is the one which is common to the circles X and Y but lies outside circle Z *i.e.* 2.
7. (b): The required region is the one common to all the three circles: *i.e.* 3
8. (c): The required region is the one which lies inside the circle Y but is not a part of either circle X or circle Z *i.e.* 6.
9. (d): The required region is the one which is common to the circles X and Z but lies outside circle Y *i.e.* 4.
10. (d): The required region is the one which lies inside the circle Z but is not a part of either circle Z or circle Y *i.e.* 7.
11. (d): The required region is the one which is common to the triangle. Circle and rectangle *i.e.* 5.
12. (b): the required region is the one which is common to the rectangle and the circle but lies outside the triangle *i.e.* 6.
13. (a): The required region is the one which lies inside the rectangle but outside the circle and the triangle i.e. 1.
14. (b): The required region is the one which lies inside the triangle but outside the circle and the rectangle *i.e.* 3.
15. (d): The required region is the one which lies inside the circle but outside the triangle and the rectangle *i.e.* 7 and 8.

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Chapter 8

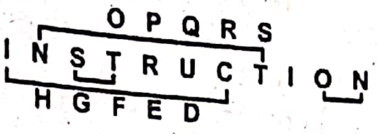
ALPHABET TEST / ALPHABETICAL SERIES

LETTER-WORD PROBLEMS

Ex. 1. How many such pairs of letters are there in the word INSTRUCTION which have as many letters between them in the word as in the English alphabet?

(a) One (b) Two (c) Three (d) Four (e) None of these

Sol. Clearly we have:

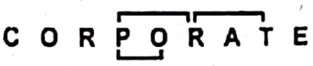


As depicted above, C and I have five letters between them in the given word as well as in English alphabet; N and T again have five letters between them and each of the pairs (S and T) and (N and O) have no letter between them.

Thus, there are four such pairs. Hence, the answer is (d).

Ex. 2: How many such pairs of letters are there in the word CORPORATE each of which has as many letters in the same sequence between them in the word as in the English alphabet?

(a) None (b) One (c) Two
(d) Three (e) More than three



Three pairs – (P, R), (R, T) and (P, O) have as many letters between them in the word as in the English alphabet. But since the letters must be in the same sequence in the word as in the English alphabet, so the desired pairs are (P, R) and (R, T) only. Hence, the answer is (c).

Ex. 3: How many such letters are there in the word BACKLASH each of which is as far away from the beginning of the word as it is from the beginning of the English alphabet?

(a) None (b) One (c) Two
(d) Three (e) More than three

Sol. Clearly, C and H are respectively the third and eighth letters in the word BACKLASH as well as in the English alphabet. Thus, there are two such letters.

Hence, the answer is (c).

EXERCISE 1

Directions ***(Questions 1 to 32): In each of the following questions, find out how many such pairs of letters are there in the given word each of which has as many letters between them in the word as in the English alphabet.***

1. NECESSARY

   (a) Nil (b) One (c) Two
   (d) Three (e) Four

2. PREAMBLE

   (a) One (b) Two (c) Three
   (d) More than three (e) None of these

3. CREATIVE

   (a) One (b) Two (c) Three
   (d) Four (e) None of these

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4. ENTHUSIASTIC
(a) Two (b) Three (c) Four
(d) More than four (e) None of these

5. PARADISE
(a) None (b) One (c) Two
(d) Three (e) Four

6. DABBLE
(a) Nil (b) One (c) Two
(d) Three (e) More than three

7. CREDIBLE
(a) Nil (b) One (c) Two
(d) Three (e) More than three

8. HORIZON
(a) One (b) Two (c) Three
(d) Four (e) None of these

9. PRISON
(a) Nil (b) One (c) Two
(d) Three (e) More than three

10. DECORATE
(a) Nil (b) One (c) Two
(d) Three (e) More than three

11. LANGUISH
(a) Nil (b) One (c) Two
(d) Three (e) None of these

12. BRIGHTER
(a) One (b) Two (c) Three
(d) Four (e) More than four

13. KLING
(a) Three (b) Four (c) Five
(d) Six (e) Seven

14. ADEQUATELY
(a) One (b) Two (c) Three
(d) Four (e) More than four

15. HACKLE
(a) One (b) Two (c) Three
(d) Four (e) More than four

16. ORIENTAL
(a) Nil (b) One (c) Two
(d) Three (e) More than three

17. CATASTROPHE
(a) One (b) Two (c) Three
(d) Four (e) None of these

18. PREDICTABLE
(a) Nil (b) One (c) Two
(d) Three (e) More than three

19. PRESENCE
(a) One (b) Two (c) Three
(d) Four (e) None of these

20. CHILDDREN
(a) Two (b) Three (c) Four

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(d) Five
(e) None of these

21. CLANGOUR
(a) One
(b) Two
(c) Three
(d) Four
(e) None of these

22. APPREHENSION
(a) Four
(b) Five
(c) Six
(d) Seven
(e) None of these

23. PICKLE
(a) Two
(b) Three
(c) Four
(d) Five
(e) None of these

24. COUNTERACT
(a) Nil
(b) One
(c) Two
(d) Three
(e) More than three

25. PRODUCTION
(a) Nil
(b) One
(c) Two
(d) Three
(e) More than three

26. SEQUENTIAL
(a) Nil
(b) One
(c) Two
(d) Three
(e) Four

27. MIDNAPORE
(a) Two
(b) Three
(c) Four
(d) Five
(e) More than five

28. EXCLUSIVE
(a) Nil
(b) Two
(c) Three
(d) Four
(e) None of these

29. ENIGMATIC
(a) Nil
(b) One
(c) Two
(d) Three
(e) Four

30. ADVERTISEMENT
(a) Three
(b) Four
(c) Five
(d) More than five
(e) none of these

31. CREDENTIAL
(a) Two
(b) Three
(c) Four
(d) Five
(e) More than five

32. WONDERFUL
(a) Nil
(b) One
(c) Two
(d) Three
(e) More than five

33. How many such pairs of letters are there in the word CLEARING each of which has two letters between them in the words as also in the alphabet?
(a) Nil
(b) One
(c) Two
(d) Three
(e) More than three

34. Find the two letters in the word EXTRA which have as many letters between them in the words as in the alphabet. If these two letters are arranged in alphabetical order, which letter will come second?
(a) A (b) E (c) R (d) T (e) X

35. The position of how many letters in the word BRAKES remains unchanged when they are arranged in alphabetical order?
(a) One (b) Two (c) Three (d) More than three

36. The position of how many letters in the word WONDERFUL will remain unchanged when the letters within the word are arranged alphabetically?

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(a) None
(b) One
(c) Two
(d) Three
(e) More than three

ANSWERS

	Letters in the word	Letters in the alphabet
1.(b):	NECESS	NOPQRS
2.(b):	AMBLE EAMB	ABCDE EDCB
3.(c):	CRE ATIVE TIV	CDE ABCDE TUV
4.(b):	ENTH NTHUSI ST	EFGH NMLKJI ST
5.(d):	PAR ARAD ADISE	PQR ABCD ABCDE
6.(e):	DAB BBLE AB ABBLE	DCB BCDE AB ABCDE
7.(e):	CRE ED EDIB DIB	CDE ED EDCB DCB
8.(d):	HORIZON RIZO ON RIZON	HIJKLMN RQPO ON RQPON
9.(e)	PRIS RISO RISON ON	PQRS RQPO RQPON ON
10.(d):	DE ECORA RAT	DE EDCBA RST
11.(d)	LAN UIS GUI	LMN UTS GHI
12.(c)	IGHTE GH TER	IHGFE GH TSR
13(d):	KL KLI LIN ING KLIN KLING	KL KJI LMN IHG KLMN KJIHG
14.(c):	DE QUAT QUATEL	DE QRST QPONML
15.(d):	HACKL HACK ACKLE KL	HIJKL HIJK ABCDE KL
16.(c):	ORIENT RIENTAL	OPQRST RQPONML
17.(c):	ST ROP OP	ST RQP OP
18.(e)	ED CTA AB EDICTABL	ED CBA AB EFGHIJKL
19.(c):	PRESS RESEN ENC	PQRS RQPON EDC
20.(c):	HI HILDREN ILDREN ILDRE	HI HIJKLMN IJKLMN IHGFE
21.(e):	CLA CLANG LAN LANGUOR NGUOR	CBA CDEFG LMN LMNOPQR NOPQR
22.(b):	APPRE PPR REHEN HENSION ON	ABCDE PQR RQPON HIJKLMN ON
23.(d):	PICKL ICK ICKL ICKLE KL	PONML IJK IJKL IHGFE KL
24.(c):	NTERACT TER	NOPQRST TSR
25:(d):	PRODUCTI RODU ON	PONMLKJI RSTU ON
26:(e)	SEQ QUEN SEQUEN ENTIA	SRQ QPON SRQPON EDCBA
27:(e)	MIDNAPORE NAP APORE PO NAPOR POR	MLKHIHGF E NOP ABCDE PO NOPQR PQR
28:(c):	EXC	EDC

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	XCLU LUSI	XWVU LKJI
29:(b):	IGMATIC	IHGFEDC
30:(c):	DVERTISEMEN DVERTI RTISEM TISEMEN ISEME	DEFGHIJKLM N DEFGHI RQPONM TSRQPON IHGFE
31:(e)	CREDENTIAL CRE REDEN ED	CDEFGHIJK L CDE RQPON

	DE EDENTIAL ENTIA	ED DE EFGHIJKL EDCBA
32:(e):	WONDER ONDERFU ON DE	WVUTSR OPQRSTU ON DE
33:(a):		
34:(b):	EXTRA	EDCBA

35.(b):

Letters in the word	B	R	A	K	E	S
Letters in Alphabetical order	A	B	E	K	R	S

The Position of K and S remain unchanged

36.(b):

Letters in the word	W	O	N	D	E	R	F	U	L
Letters in Alphabetical order	D	E	F	L	N	O	R	U	W

The position of U only remains unchanged.

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Chapter 9

ALPHA-NUMERIC SEQUENCE PUZZLE

In this type of questions, a jumbled sequence of some letters, numbers ad symbols is given, followed by certain questions based on it.

The questions asked may be any of the following types:

1. To find elements (letters, numbers or symbols) satisfying certain conditions in the given sequence (See Q.1 & 2 of Example);
2. To determine the element at a certain given relative position in the sequence (See Q 3 Example);

Remember: You have to study the given terms be it letters, numbers or symbols in relation to their location in the given sequence, and not as per their status in English alphabet or Indian number system.

Example: ***Study the following arrangement of symbols, letters and numbers to answer the questions given below it:***

δ = β F 2 ★ K S 7 5 # $ P L V 8 @ M U E 6 ↑ Q G © 9 3 & T Y £

Q.1. How many such letters are there in the arrangement each of which is either immediately preceded by a symbol or immediately followed by a number, both not both?

(a) Three (b) Four (c) Five (d) Six (e) None of these

Sol. The letters satisfying the given conditions are shown as under:

δ = β F 2 ★ [K] [S] 7 5 # $ [P] L [V] 8 @ [M] U [E] 6 ↑ [Q] G © 9 3 & [T] Y £

Clearly, there are 8 such letters.

Hence, the answer is (e).

Q.2. How many such consonants are there in the above arrangement each of which is immediately followed by a consonant but not immediately preceded by a symbol?

(a) Nil (b) One (c) Two (d) Three (e) More than three

Sol. We know that of the 26 letters of English alphabet, five letters namely A, E, I, O, U are vowels, while remaining are consonants.

The consonants satisfying the given conditions may be shown as under:

δ = β F 2 ★ K S 7 5 # $ P [L] V 8 @ M U E 6 ↑ Q G © 9 3 & T Y £

Clearly, there is only one such consonant.

Hence, the answer is (b).

Q.3. If all the elements after the middle element in the above arrangement are written in the reverse order, which of the following will be seventh towards right of the twelfth element from the left end?

(a) U (b) 2 (c) T (d) 6 (e) None of these

Sol. The middle element in the given arrangement is 8. Writing all the elements after 8 in the reverse order, we get the following sequence:

δ = β F 2 ★ K S 7 5 # $ P L V 8 £ Y T & 3 9 © G Q ↑ 6 E U M @

Counting from the left in the above sequence, the twelfth element is $. The seventh element to the right of $ is T.

Hence, the answer is (c).

PRACTICE EXERCISE

Directions: ***(Questions 1 to 5): Study the following arrangement carefully and answer the questions given below:***

R E 5 D A P $ 3 T I Q 7 9 B # 2 K % U 1 M W 4 ★ J 8 N

1. Which of the following is exactly in the middle between 3 and 1 in the above arrangement?

(a) B (b) K (c) 9 (d) # (e) None of these

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2. How many such numbers are there in the above arrangement, each of which is immediately preceded by a consonant and not immediately followed by a consonant?
(a) None (b) One (c) Two (d) Three (e) None of these

3. How many such vowels are there in the above arrangement, each of which is immediately followed by a number but not immediately preceded by a consonant?
(a) None (b) One (c) Two (d) Three (e) Four

4. Which of the following is seventh to the left of the sixteenth from the left in the above arrangement?
(a) A (b) U (c) 4 (d) T (e) None of these

5. Four of the following five are alike in a certain way based on their position in the above arrangement and so form a group. Which is the one that does not belong to that group?
(a) B K 7 (b) M★ U (c) D P E (d) W J 1 (e) 3 Q P

Directions (Questions 6 to 10): Study the following arrangement carefully and answer the questions given below:

W 1 R % 4 J E # 7 M T 2 I 9 B H 3 A $ 9 F Q 5 D G 6 U S P

6. Which of the following is the seventh to the right of eighteen from the right end?
(a) 4 (b) E (c) $ (d) # (e) None of these

7. If the order of last fifteen elements is reversed, which of the following will be fifth to the right of twelfth from the left end?
(a) U (b) $ (c) 3 (d) 6 (e) None of these

8. Four of the following five are alike in a certain way on the basis of above arrangement and hence from a group. Which one does not belong to that group?
(a) R W 4 (b) 5 F G (c) 9 Q A (d) 3 B $ (e) 7 E T

9. If the positions of E and A are interchanged and similarly the positions of R and U are interchanged then how many symbols will be there each of which is either preceded or followed by a vowel?
(a) None (b) One (c) Two (d) Three (e) Four

10. What should come in place of question mark on the basis of above arrangement?
R 4 # M 2 B 3 $ Q ?
(a) 5 G U (b) D 6 S (c) 5 G S (d) D 6 P (e) None of these

Directions (Questions 11 to 15): ***Study the following digit-letter-symbol sequence carefully and answer the questions given below:***

R ★ T J L 2 $ D = M # 8 C % B < K 1 & A W ? P E + Q @ 7 F 6

11. How many each numbers are there in the above sequence, each of wh ch is immediately preceded by a consonant and immediately followed by a symbol
(a) Nil (b) One (c) Three (d) Four (e) None of these

12. Which of the following is sixth to the left of eighteenth element from the left?
(a) % (b) C (c) 1 (d) 8 (e) None of these

13. If the above sequence is written in reverse order then which of the following will be sixth to the right of sixteenth element from the right end?
(a) M (b) A (c) B (d) ? (e) None of these

14. If the first fifteen elements in the above sequence are written in reverse order, then which of the following will be twenty-first from the right end?
(a) 2 (b) $ (c) = (d) L (e) None of these

15. What should some in place of question mark in the following on the basis of above sequence?
★ R J : F 6 @ L J $ Q @ E D $ M : ?
(a) # M C (b) P E W (c) P ? + (d) P E ? (e) None of these

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ANSWERS

1. (a): There are 11 elements between 3 and 1. So, the middle letter will be the sixth one which is B.

2. (c):
R E 5 D A P $ 3 T I Q 7 9 B # 2 K % U 1 M W 4 ★ J 8 N

3. (b):
R E 5 D A P $. 3 T I Q 7 9 B # 2 K % U 1 M W 4 ★ J 8 N

4. (d): The 16th element from the left is 2 and element 7 steps to the left of 2 is T.

5. (c): In all other groups, the first elements moves 3 steps forward to give the second element, which in turn moves 5 steps backward to give the third element.

6. (c): The 18th element from the right end of the arrangement is 2, and the 7th element to the right of 2 is $.

7. (a): The new arrangement is:
W 1 R % 4 J E # 7 M T 2 I 9 P S U 6 G D 5 Q F 9 $ A 3 H B
The 12th element from the left end of this arrangement is 2, and the 5th element to the right of 2 is U.

8. (c): In all other groups, the first and second elements move 2 steps backward and 4 steps forward respectively to give the second and third elements.

9. (d): Such symbols in the new arrangement may be indicated as follow
W 1 U % 4 J E # 7 M T 2 I 9 B H 3 E $ 9 F Q 5 D G 6 R S P

10. (d): Each element of each term moves 7 steps forward to give the corresponding element of the next term.

11. (e):
R ★ T J L 2 $ D = M # 8 C % B < K 1 & A W ? P E + Q @ 7 F 6

12. (d): The 18th element from the left is 1. The 6th element to the left of 1 is 8.

13. (a): The new arrangement is:
6 F 7 @ Q + E P ? W A & 1 K < B % C 8 # M = D $ 2 L J T ★ R
The 16th element from the right end of this arrangement is <. The 6th element to the right of < is M.

14. (a): The new arrangement is:
B % C 8 # M = D $ 2 L J T ★ R < K 1 & A W ? P E + Q @ 7 F 6
The 21st element from the right end of this arrangement is 12

15. (b): In each of the analogous pairs, the corresponding elements of both the terms occupy the same position from the beginning and end of the given sequence

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Chapter 10

NUMBER, RANKING & TIME SEQUENCE TEST

TYPE 1: NUMBER TEST

In this type of questions, generally a set, group or series of numerals is given and the candidate is asked to trace out numerals following certain given conditions or lying at specific mentioned positions after shuffling according to a certain given patter.

ILLUSTRATIVE EXAMPLES

Ex. 1: How many such 5s are there in the following number sequence each of which is immediately preceded by 3 or 4 but not immediately followed by 8 or 9?

3 5 9 5 4 5 5 3 5 8 4 5 6 7 3 5 7 5 5 4 5 2 3 5 1 0

(a) None (b) three (c) Four (d) Five (e) None of these

Sol: As you know, a number which comes after a given number is said to **follow** it while the one which comes before the given number **precedes** it.

Thus, the numbers satisfying the given conditions may be marked as follows:

3 5 9 5 4 [5] 5 3 5 8 4 [5] 6 7 3 [5] 7 5 5 4 [5] 2 3 [5] 1 0

Clearly, there are five such 5s. Hence, the answer is (d).

Ex. 2: In the series given below, how many 8s are there each of which is exactly divisible by its immediate preceding as well as succeeding numbers?

2 8 3 8 2 4 8 2 4 8 6 8 2 8 2 4 8 3 8 2 8 6

(a) One (b) Two (c) Three (d) Four (e) None of these

Sol. Clearly, we may mark such sets of 3 numbers, in which the middle number is 8 and each of the two numbers on both sides of it is a factor of 8, as shown below:

2 8 3 8 2 [4 8 2] 4 8 6 8 [2 8 2] 4 8 3 8 2 8

So, there are two such 8s. Hence, the answer is (b)

Ex. 3. In the following series, how many such odd numbers are there which are divisible by 3 or 5, then followed by odd numbers, and then also followed by even numbers?

12, 19, 21, 3, 25, 18, 35, 20, 22, 21, 45, 46, 47, 48, 9, 50, 52, 54, 55, 56

(a) Zero (b) One (c) Two (d) Three (e) None of these

Sol. We first mark the odd numbers in the given series:

12, [19,] [21,] [3,] [25,] 18, [35,] 20, 22, [21,] [45,] 46, [47,] 48, [9,] 50, 52, 54, [55,] 56

Of these, we cross out those numbers which are not divisible by 3 or 5.

12, [~~19~~,] [21,] [3,] [25,] 18, [35,] 20, 22, [21,] [45,] 46, [~~47~~,] 48, [9,] 50, 52, 54, [55,] 56

Next we cross out the numbers which are not immediately followed by an odd number.

12, [~~19~~,] [21,] [3,] [~~25~~,] 18, [~~35~~,] 20, 22, [21,] [~~45~~,] 46, [~~47~~,] 48, [~~9~~,] 50, 52, 54, [~~55~~,] 56

Finally, we cross out the numbers who do not have an even number at the second place to their right.

12, [~~19~~,] [~~21~~,] [3,] [~~25~~,] 18, [~~35~~,] 20, 22, [21,] [~~45~~,] 46, [~~47~~,] 48, ~~9~~, 50, 52, 54, [~~55~~,] 56

Thus, there are 2 such numbers, Hence, the answer is (c).

PRACTICE EXERCISE 1

1. Which is the third number to the left of the number which is exactly in the middle of the following sequence of number?

1 2 3 4 5 6 7 8 9 2 4 6 8 9 7 5 3 1 9 8 7 6 5 4 3 2 1

(a) 3 (b) 4 (c) 5 (d) 6 (e) 7

2. How many 6s are there in the following number series, each of which is immediately preceded by 1 or 5 and immediately followed by 3 or 9?

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2 6 3 7 5 6 4 2 9 6 1 3 4 1 6 3 9 1 5 6 9 2 3 1 6 5 4 3 2 1 9 6 7 1 6 3

(a) None (b) One (c) Two (d) Three (e) None of these

3. In the series given below, count the number of 9s, each of which is not immediately preceded by 5 but is immediately followed by either 2 or 3. How many such 9s are there?

1 9 2 6 5 9 3 8 3 9 3 2 5 9 2 9 3 4 8 2 6 9 8

4. How many 4's are there preceded by 7 but not followed by 3?

5 9 3 2 1 7 4 2 6 9 7 4 6 1 3 2 8 7 4 1 3 8 3 2 5 6 7 4 3 9 5 8 2 0 1 8 7 4 6 3

(a) Three (b) Four (c) Five (d) Six

Directions (Questions 5 to 7): *Study the following number sequence and answer the questions given below it:*

5 1 4 7 3 9 8 5 7 2 6 3 1 5 8 6 3 8 5 2 2 4 3 4 9 6

5. How many odd number are there in the sequence each of which is immediately followed by an odd number?

(a) 1 (b) 2 (c) 3 (d) 4 (e) more than 4

6. How many even numbers are there in the sequence which are immediately preceded by an odd number but immediately followed by an event number?

(a) 1 (b) 2 (c) 3 (d) 4 (e) More than 4

7. How many odd numbers are there in the sequence which are immediately preceded and also immediately followed by an even number?

(a) 1 (b) 2 (c) 3 (d) 4 (e) More than 4

8. If each of the odd digits in the number 54638 is decreased by 1 and each of the even digits is increased by 1, then which of the following will be the sum of the digits of the new number?

(a) 25 (b) 26 (c) 28 (d) 29 (e) None of these

93 The positions of how many digits in the number 321465987 will remain same when the digits are arranged in ascending order?

(a) None (b) One (c) Two (d) Three (e) Four

10. How many such pairs of digits are there in the number 95137248 each of which has as many digits between them in the number as when they are arranged in ascending order.

(a) None (b) One (c) Two (d) Three (e) More than three

11. How many numbers amongst the numbers 9 to 54 are there which are exactly divisible by 9 but not by 3?

(a) 8 (b) 6 (c) 5 (d) Nil

12. How many numbers from 11 to 50 are there which are exactly divisible by 7 but not by 3?

(a) Two (b) Four (c) Five (d) Six (e) Seven

ANSWERS (EXERCISE 1)

1. (b): There are 27 numbers in the given sequence.
So, middle number = 14th number = 9
Clearly, the third number to the left of this 9 is 4

2. (d): 2 6 3 7 5 6 4 2 9 6 1 3 4 1 [6] 3 9 1 5 [6] 9 2 3 1 6 5 4 3 2 1 9 6 7 1 [6]

3. (b): 1 [9] 2 6 5 9 3 8 3 [9] 3 2 5 9 2 [9] 3 4 8 2 6 9 8

4. (b): 5 9 3 2 1 7 [4] 2 6 9 7 [4] 6 1 3 2 8 7 [4] 1 3 8 3 2 5 6 7 4 3 9 5 8 2 0 1 8 7 [4] 6 3

5. (e): 5 1 4 [7] [3] 9 8 [5] 7 2 6 [3] [1] 5 8 6 3 8 5 2 2 4 3 4 9 6

6. (c): 5 1 4 7 3 9 8 5 7 [2] 6 3 1 5 [8] 6 3 8 5 [2] 2 4 3 4 9 6

7. (d): 5 1 4 7 3 9 8 5 7 2 6 3 1 5 8 6 [3] 8 [5] 2 2 4 [3] 4 [9] 6

8. (e): The new number formed is 45729.
∴ Required sum = (4 + 5 + 7 + 2 + 9) = 27

9. (d):

Original Number	3	2	1	4	6	5	9	8	7
Number formed by arranging Digits in ascending order	1	2	3	4	5	6	7	8	9

Clearly, the position of 2, 4 and 8 remain unaltered

10\. (d): The given number is 95137248.
Arranging the digits in ascending order, we get: 12345789.
We have the following 3 pairs of digits, satisfying the given conditions:

Original Number	5 1 3	3 7 2 4 8	7 2 4
Digits in descending order	3 4 5	3 4 5 7 8	4 5 7

11\. (d): Any number divisible by 9 is also divisible by 3.

12\. (b): The numbers from 11 to 50, which are divisible by 7 are 14, 21, 28, 35, 42, 49. But out of these, 21 and 42 are divisible by 3.
∴ Required numbers are 14, 28, 35, 49.
Clearly, there are four such numbers.

TYPE 2: RANKING TEST

In this type of questions, generally the ranks of a person both from the top and from the bottom are mentioned and the total number of persons is asked. However, sometimes this question is put in the form of a puzzle of interchanging seats by two persons.

ILLUSTRATIVE EXAMPLES

Ex. 1: Rehan ranks seventh from the top and twenty-sixth from the bottom in a class. How many students are there in the class?

(a) 31 (b) 32 (c) 33 (d) 34

Sol. Clearly, the whole class consists of:
(i) 6 students who have ranks higher than Rehan;
(ii) Rehan; and
(iii) 25 students who have ranks lower than Rehan, i.e., (6 + 1 + 25) = 32 students.
Hence, the answer is (b).

Ex. 2: Malik is fourteenth from the right end in a row of 40 boys. What is his position from the left end?

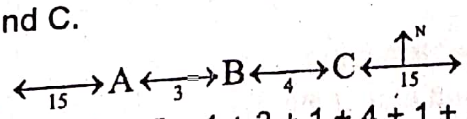
(a) 24th (b) 25th (c) 26th (d) 27th (e) None of these

Sol. Clearly, number of boys towards the left of Malik = (40 – 14) = 26.
So, Malik is 27th from the left end.
Hence, the answer is (d)

Ex. 3: In a row of boys facing the North, A is sixteenth from the left end and C is sixteenth from the right end. B, who is fourth to the right of A, is fifth to the left of C in a row. How many boys are there in the row?

(a) 39 (b) 40 (c) 41 (d) 42 (e) None of these

Sol. Clearly, according to the given conditions, there are 15 boys to the left of A, as well as to the right of C. Also, B lies between A and C such that there are 3 boys between A and B; and 4 boys between B and C.



So, number of boys in the row = (15 + 1 + 3 + 1 + 4 + 1 + 15) = 40
Hence, the answer is (b)

PRACTICE EXERCISE 2

1\. Saima ranked ninth from the top and thirty-eighth from the bottom in a class. How many students are there in the class?

(a) 45 (b) 46 (c) 47 (d) 48

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2. A class of boys stands in asingle line. One boys is nineteenth in order from both the ends. How many boys are there in the class
(a) 27 (b) 37 (c) 38 (d) 39

3. In a row of boys, Javed is seventh from the start and eleventh from the end. In another row of boys, Viki is tenth from the start and twelfth from the end. How many boys are there in both the rows together?
(a) 36 (b) 37 (c) 39 (d) 20 (e) cannot be determined

4. In a row of boys, A is thirteenth from the left and D is seventeenth from the right. If in this row A is eleventh from the right then what is the position of D fom the left?
(a) 6^{th} (b) 7^{th} (c) 10^{th} (d) 12^{th} (e) None of these

5. In a row of boys, A is fifteenth from the left and B is fourth from the right. There are three boys between A and B. C is just left of A. what is C's position from the right?
(a) 9^{th} (b) 10^{th} (c) 12^{th} (d) 13^{th}

6. Rashid is fifteenth from the front in a column of boys. There were thrice as many behind him as there were in front. How many boys are there between Rashid and the seventh boys from the end of the column?
(a) 33 (b) 34 (c) 35 (d) Data inadequate

7. N ranks fifth in a class. S is eighth from the last. If T is sixt after N and just in the middle of N and S, then how many students are there in the class?
(a) 23 (b) 24 (c) 25 (d) 26

8. In a row of 21 girls, when Moniba was shifted by four places towards the right. She became 12^{th} from the left end. What was her earlier position from the right end of the row?
(a) 9^{th} (b) 10^{th} (c) 11^{th} (d) 12^{th} (e) 14^{th}

9. Students line up in a que in which Aziz stands fifteenth from the left and Sajid is seventh from the right. If they interchange their places, Sajid would be fifteenth from the right. How many students are there in the queue?
(a) 21 (b) 22 (c) 29 (d) None of these

10. In a row of 40 boys, Sabir was shifted 10 places to the right of Rehan and Kanwal was shifted 10 places to the left of Viki. If Viki was twenty-six from the left and threre were three boys between Kanwal and Sabir after shifting, what was the position of Rehan in the row?
(a) 10^{th} from the right end (b) 10^{th} from the left end
(c) 39^{th} from the right end (d) Data inadequate
(e) None of these

ANSWERS (EXERCISE 2)

1. (b): Clearly, number of students in the class = (8 + 1 + 37) = 46.
2. (b): Clearly, number of boys in the class = (18 + 1 + 18) = 37
3. (e): Clearly, total number of boys in both the rows
= (Number of boys in Javed's row) + (Number of boys in Viki's row)
= (6 + 1 + 10) + (9 + 1 + 11) = (17 + 21) = 38
4. (b): Clearly, A is 13^{th} from the left and 11^{th} from the right end of the row.
So, number of boys in the row = (12 + 1 + 10) = 23.
Now, D is 17^{th} from the right.
Number of boys to the left of D = (23 – 17) = 6.
Hence, D is 7^{th} from the left end of the row.
5. (a): Number of boys in the row = (15 + 4 + 3) = 22.
C is just left of A. So, C is 14^{th} from the left end.
Number of boys to the right of C = (22 – 14) = 8
So, C is 9^{th} from, the right end of the row.
6. (c): Number of boys in front of Rashid = 14.
Number of boys behind Rashid = (14 x 3) = 42

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∴ Total number of boys in the column = (14 + 1 + 42) = 57

In a column of 57 boys, the seventh boy from the end is clearly 51st from the start.

Thus, we have to find the number of boys between the 15th and the 51st boys, which is clearly 35.

7. (b) $\overset{4}{\leftrightarrow} N \overset{5}{\leftrightarrow} T \overset{5}{\leftrightarrow} S \overset{7}{\leftrightarrow}$

8. (e): The change of place by Moniba can be shown as under:

1 2 3 4 5 6 7 8 9 10 11 M 13 14 15 16 17 18 19 20 21

9. (c): Sajid's new position is 15th from the right as well as the left end of the row.

∴ Number of students in the queue = (14 + 1 + 14) = 29.

10. (d): Viki is 26th from left and Kanwal is 10 places to the left of Viki. So, Kanwal is 16th from left.

Now, there are three boys between Kanwal and Sabir. So, Sabir may be 12th or 20th from left.

Since the exact position of Sabir cannot be ascertained, so the given data are inadequate.

TYPE 3: TIME SEQUENCE TEST

Ex. 1: If the seventh day of a month is three days earlier than Friday, what day will it be on the nineteenth day of a month?

(a) Sunday (b) Monday (c) Wednesday (d) Friday

Sol. If the seventh day of month is three days earlier than Friday, which is Tuesday.

So, the fourteenth day is also Tuesday and thus the nineteenth is Sunday.

Hence, the answer is (a)

Ex. 2: If it was Saturday on 17th December, 2002 what was the day on 22bd December, 2004?

(a) Monday (b) Tuesday (c) Wednesday (d) Sunday

Sol. Clearly, every day repeats itself on the seventh day. Now, 17th Dec. 2002 – 16th Dec. 2003 is a period of 365 days. Dividing by 7, we get 52 weeks and one day. Thus, the 365th day will be the same as the first day. i.e., 16th Dec. 2003 is also Saturday. Now, 16 Dec. 2003 – 15 Dec. 2004 is a period of 366 days (because 2004, being a leap year, has 29 days in February), Thus, as shown above, 14th Dec. 2004 will be the same as 16th Dec. 2003, i.e., Saturday. SO, 21st Dec. 2004 is also Saturday and thus, 22 Dec. 2004 is a Sunday.

Hence, the answer is (d).

Note: For such questions as Ex. 2, remember

(i) A year has 365 days.

(ii) Years, divisible by 4, are leap years, e.g., 1980, 1984, 1988, 1992, 1996,.....2004, 2008,.... They have 366 days.

(iii) February in a leap year has 29 days.

(iv) The last day of a year is the same as first day.

Thus, if the first day of a year is Friday, then the last day of a year is Friday and the first day of the next year is Saturday.

However, if the first day of a leap year is Friday, then the last day of the year is Saturday and the first day of the next year is Sunday.

PRACTICE EXERCISE 3

1. Aziz leaves his house at 20 minutes to seven in the morning, reaches Kamal's house in 25 minutes, they finish their breakfast in another 15 minutes and leaves for their office which takes another 35 minutes. At what time do they leave Kamal's house to reach their office?

(a) 7.40 a.m (b) 7.20 a.m. (c) 7.45 a.m. (d) 8.15 a.m (e) 7.55 a.m.

2. Reaching the place of meeting 20 minutes before 8.50 hrs Sami found himself thirty minutes earlier than the man who came 40 minutes late. What was the scheduled time of

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the meeting?
(a) 8.00 (b) 8.05 (c) 8.10 (d) 8.20

3. A monkey climbs 30 feet at the beginning of each hour at rests for a while when he slips back 20 feet before he again starts climbing in the beginning of the next hour. If he begins his ascent at 8.00 am, at what time will he first touch a flag at 120 from the ground?
(a) 4.p.m. (b) 5 p.m. (c) 6 p.m. (d) none of these

4. Muskan would like to complete all her homework before 10 p.m. in order to watch an important TV programme. She has 40 minutes assignment in each of her five prepared subjects. What is the latest time at which she can start and still complete her homework in time for the programme?
(a) 6.30 p.m (b) 6.40 p.m (c) 7.10 p.m (d) 7.20 p.m

5. If Tuesday falls on the fourth of the month, then which day will fall three days after the 24th?
(a) Monday (b) Tuesday (c) Thursday (d) Friday

6. If 30th January 2003 was Thursday, what was the day on 2nd March, 2003?
(a) Tuesday (b) Thursday (c) Saturday (d) Sunday

7. If the 25th of August in a year is Thursday, the number of Mondays in that month is
(a) 3 (b) 4 (c) 5 (d) 6

8. If 18th February, 2005 falls on Friday then what will be the day on 18th February, 2007?
(a) Sunday (b) Monday (c) Tuesday (d) Wednesday

ANSWERS (EXERCISE 3)

1. (b): Aziz leaves his house at 6.40 a.m.
He reaches Kamal's house in 25 minutes, i.e., at 7.05 a.m
Both leaves for office 15 minutes after 7.05 a.m., i.e., at 7.20 am.

2. (d): Sami reached the place 20 minutes before 8.50 hrs, i.e., at 8.30 hrs.
Clearly, the man who was 40 minutes late would reach the place at 9.00 hrs.
So, the scheduled time of the meeting was 40 minutes before 9.00 hrs. i.e. 8.20 hrs

3. (c): Clearly, the monkey climbs 10 feet in one hour.
So, it will climb upto a height of 90 feet in 9 hours, i.e., at 5.00 p.m. it will then ascend a height of 30 feet in the next hour to touch the peak at 6.00 p.m

4. (b): Time needed to complete all the 5 assignments = (40 x 5) minutes = 200 minutes
= 3 hours 20 minutes.
Thus, the required time is 3 hours 20 minutes before 10 p.m., i.e., 6.40 p.m.

5. (c): The 4th day is Tuesday. So, the 11th, 18th and 25th day are also Tuesdays.
Three days after the 24th day is 27th day, which is clearly Thursday.

6. (d): 30th January, 2003 was Thursday.
So, 6th, 13th, 20th and 27th February were all Thursdays.
Thus 2nd March, 2003 was 3 days after Thursday, i.e., Sunday.

7. (c): 25thAugust is a Thursday.
So, 22nd August is a Monday.
So, Mondays fall on 1st, 8th, 15th, 22nd and 29th of August.
Thus, there are five Mondays.

8. (a): 18th February, 2005 was Friday.
So, 18th February, 2006 was Saturday.
∴ 18th February, 2007 will be Sunday.

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Chapter 11

LOGICAL SEQUENCE OF WORDS

In this type of questions, certain inter-related words are given and numbered, followed by various sequence of the numbers denoting them, as alternatives. The candidate is required to arrange these words in a logical sequence based on a common property and then choose the correctly graded sequence from the given alternatives.

Some common sequences have been discussed below:

I. Sequence of occurrence of events or various stages in a process

Example 1: ***Arrange the following in a meaningful sequence:***

1. Consultation 2. Illness 3. Doctor 4. Treatment 5. Recovery

(a) 1,3,1,4,5 (b) 2,3,4,1,5 (c) 4,3,1,2,5 (d) 5,1,4,3,2

Solution. Clearly, **Illness** occurs first. One then goes to a doctor and after **consultation** with him, undergoes **treatment** to finally attain recovery.
Thus, the correct order is 2,3,1,4,5. Hence, the answer is (a).

Example 2: ***Arrange the following in a logical order:***

1. Birth 2. Death 3. Funeral 4. Marriage 5. Education

(a) 1,3,4,5,2 (b) 1,5,4,2,3 (c) 2,3,4,5,1 (d) 4,5,3,1,2

Solution. Clearly, the given words when arranged in the order of various events as they occur in a man's life, from the sequence: Birth, Education, Marriage, Death, Funeral.
So the correct order becomes 1,5,4,2,3
Hence, the answer is (b)

II. Sequence of objects in a class or group, from part to the whole:

Example 3: ***Arrange the following in a meaningful order, from particular to general:***

1. Family 2. Community 3. Member 4. Locality 5. Country

(a) 3,1,2,4,5 (b) 3,1,2,5,4 (c) 3,1,4,2,5 (d) 3,1,4,5,2

Solution. Clearly, a **member** is a part of a **family**, which in turn is a part of **community,** the community lives in a **locality** which lies within a **country**.
Thus, the correct order is 3,1,2,4,5.
Hence, the answer is (a).

Example 4: ***Arrange the following in a logical order:***

1. Shoulder 2. Wrist 3. Elbow 4. Palm 5. Finger

(a) 2,4,5,3,1 (b) 3,1,4,2,5 (c) 3,4,5,2,1 (d) 5,4,2,3,1

Solution. Clearly, we are given the names of parts of a hand, which may be arranged

i. From top to bottom, i.e., Shoulder, Elbow, Wrist, Palm, Finger, which is 1,3,2,4,5;

or

ii. From bottom to top i.e., Finger, Palm, wrist, Elbow, Shoulder, which is 5,4,2,3,1

Out of these, the sequence 5,4,2,3,1 is given in the alternatives provided.
Hence, the answer is (d).

III. Sequence of increasing/ decreasing size, value, intensity etc:

Example 5: ***Arrange the following in a logical sequence from small to big:***

1. Bungalow 2. Flat 3. Cottage
4. House 5. Palace 6. Mansion

(a) 3,2,1,4,6,5 (b) 3,2,4,1,5,6 (c) 3,2,4,1,6,5 (d) 5,6,4,1,2,3

Solution. Clearly, the names of various dwelling units, when arranged in increasing order of their sizes, from the sequence: Cottage, flat, House, Bungalow, Mansion, Palace
Thus, the correct order is 3,2,4,1,6,5.
Hence, the answer is (c).

Example 6: ***Arrange the following in a logical order:***

1. Gold 2. Iron 3. Sand 4. Platinum 5. Diamond

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(a) 2,4,3,5,1 (b) 3,2,1,5,4 (c) 4,5,1,3,2 (d) 5,4,3,2,1

Solution. Clearly, the given names when arranged in order of increasing value i.e., from cheapest to the most expensive form the sequence: Sand, iron, Gold, Diamond, Platinum.

Thus, the correct order is 3,2,1,5,4

Hence, the answer is (b).

Example 7: ***Arrange the following in a logical order:***

1. Euphoria 2. Happiness 3. Ambivalence 4. Ecstasy 5. Pleasure

(a) 1,4,2,5,3 (b) 2,1,3,4,5 (c) 3,2,5,1,4 (d) 4,1,3,2,5

Solution. All the given words stand for 'joy', but the intensity increases in the order – Ambivalence, Happiness, Pleasure, Euphoria, Ecstasy.

Thus, the correct order is 3,2,5,1,4

Hence, the answer is (c).

IV. Sequence in which a chain of given objects is formed:

Example 8: ***Arrange the following in a meaningful sequence:***

1. Phrase 2. Letter 3. Word 4. Sentence

(a) 1,2,3,4 (b) 1,3,2,4 (c) 2,3,1,4 (d) 2,3,4,1

Solution. A group of **letters** make a **word.** A group of **words** makes a **phrase**. Group of **Phrases** makes a **sentence.**

Thus, the correct order is 2,3,1,4.

Hence, the answer is (c).

Example 9: ***Arrange the following in a logical order:***

1. Frog 2. Eagle 3. Grasshopper 4. Snake 5. Grass

(a) 1,3,5,2,4 (b) 1,3,2,4 (c) 2,3,1,4 (d) 2,3,4,1

Solution. Clearly, a **grasshopper** feeds on **grass**, a **frog** feeds on a **grasshopper**, a **snake** feeds on a **frog** and an **eagle** feeds on a **snake**. Thus, a food-chain is formed.

So, the correct order is 5,3,1,4,2.

Hence, the answer is (c).

PRACTICE EXERCISE 1

Directions (Questions 1 to 40): ***In each of the following questions, arrange the given words in a meaningful sequence and then choose the most appropriate sequence from amongst the alternatives provided below each question:***

1. 1. Honey 2. Flower 3. Bee 4. Wax
(a) 1,3,4,2 (b) 2,1,4,3 (c) 2,3,1,4 (d) 4,3,2,1

2. 1. Site 2. Plan 3. Rent 4. Money 5. Building 6. Construction
(a) 1,2,3,6,5,4 (b) 2,3,6,5,1,4 (c) 3,4,2,6,5,1 (d) 4,1,2,6,5,3

3. 1. Reading 2. Composing 3. Writing 4. Printing
(a) 1,3,2,4 (b) 2,3,4,1 (c) 3,1,2,4 (d) 3,2,4,1

4. 1. Sentence 2. Chapter 3. Letter 4. Book 5. Word 6. Paragraph
(a) 4,2,1,6,5,3 (b) 4,2,6,1,5,3 (c) 4,6,1,2,3,5 (d) 4,6,2,5,1,3

5. 1. Cut 2. Put On 3. Mark 4. Measure 5. Tailor
(a) 1,3,2,4,5 (b) 2,4,3,1,5 (c) 3,1,5,4,2 (d) 4,3,1,5,2

6. 1. Police 2. Punishment 3. Crime 4. Justice 5. Judgment
(a) 1,2,3,4,5 (b) 3,1,2,4,5 (c) 3,1,4,5,2 (d) 5,4,3,2,1

7. 1. Country 2. Furniture 3. Forest 4. Wood 5. Tree
(a) 1,3,5,4,2 (b) 1,4,3,2,5 (c) 2,4,3,1,5 (d) 5,2,3,1,4

8. 1. Elephant 2. Cat 3. Mosquito 4. Tiger 5. Whale
(a) 1,3,5,4,2 (b) 2,5,1,4,3 (c) 3,2,4,1,5 (d) 5,3,1,2,4

9. 1. Key 2. Door 3. Lock 4. Room 5. Switch

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(a) 1,2,3,5,4 (b) 1,3,2,4,5 (c) 4,2,1,5,3 (d) 5,1,2,4,3

10. 1. Book 2. Pulp 3. Timber 4. Jungle 5. Paper
(a) 2,5,1,4,3 (b) 3,2,5,1,4 (c) 4,3,2,5,1 (d) 5,4,3,1,2

11. 1. College 2. Child 3. Salary 4. School 5. Employment
(a) 1,2,4,3,5 (b) 2,4,1,5,3 (c) 4,1,3,5,2 (d) 5,3,2,1,4

12. 1. Mother 2. Child 3. Milk 4. Cry 5. Smile
(a) 1,5,2,4,3 (b) 2,4,1,3,5 (c) 2,4,3,1,5 (d) 3,2,1,5,4

13. 1. Leaf 2. Fruit 3. Stem 4. Root 5. Flower
(a) 3,4,5,1,2 (b) 4,1,3,5,2 (c) 4,3,1,2,5 (d) 4,3,1,5,2

14. 1. Punjab 2. Universe 3. Lahore 4. World 5. Pakistan
(a) 1,5,3,2,4 (b) 2,1,3,5,4 (c) 3,1,5,4,2 (d) 5,4,2,1,3

15. 1. Travel 2. Destination 3. Payment 4. Berth / Seat Number
5. Reservation 6. Availability of berth/ seat for reservation
(a) 1,2,5,4,3,6 (b) 2,6,3,5,4,1 (c) 5,3,4,1,6,2 (d) 6,2,5,4,3,1

16. 1. Atomic Age 2. Metallic Age 3. Stone Age 4. Alloy Age
(a) 1,3,4,2 (b) 2,3,1,4 (c) 3,2,4,1 (d) 4,3,2,1

17. 1. Post-box 2. Letter 3. Envelope 4. Delivery 5. Clearance
(a) 2,3,1,4,5 (b) 3,2,1,4,5 (c) 3,2,1,5,4 (d) 3,2,4,5,1

18. 1. Foetus 2. Child 3. Baby 4. Adult 5. Youth
(a) 1,2,4,3,5 (b) 1,3,2,5,4 (c) 2,3,5,4,1 (d) 5,4,2,3,1

19. 1. Curd 2. Grass 3. Butter 4. Milk 5. Cow
(a) 2,5,4,3,1 (b) 4,2,5,3,1 (c) 5,2,3,4,1 (d) 5,2,4,1,3

20. 1. Heel 2. Shoulder 3. Skull 4. Neck 5. Knee
6. Chest 7. Thigh 8. Stomach 9. Face 10. Hand
(a) 2,4,7,10,1,5,8,9,6,3 (b) 3,4,7,9,2,5,8,10,6,1
(c) 4,7,10,1,9,6,3,2,5,8 (d) 3,9,4,2,10,6,8,7,5,1

21. 1. Butterfly 2. Cocoon 3. Egg 4. Worm
(a) 1,3,4,2 (b) 1,4,3,2 (c) 2,4,1,3 (d) 3,4,2,1

22. 1. Rainbow 2. Rain 3. Sun 4. Happy 5. Child
(a) 2,1,4,3,5 (b)2,3,1,5,4 (c) 4,2,3,5,1 (d) 4,5,1,2,3

23. 1. Yarn 2. Plant 3. Saree 4. Cotton 5. Cloth
(a) 2,4,1,5,3 (b) 2,4,3,5,1 (c) 2,4,5,1,3 (d) 2,4,5,3,1

24. 1. Study 2. Job 3. Examination 4. Earn 5. Apply
(a) 1,3,2,5,4 (b) 1,2,3,4,5 (c) 1,3,5,2,4 (d) 1,3,5,4,2

25. 1. Rain 2. Monsoon 3. Rescue
4. Flood 5. Shelter 6. Relief
(a) 1,2,3,4,5,6 (b) 1,2,4,5,3,6 (c) 2,1,4,3,5,6 (d) 4,1,2,3,5,6

26. 1. Windows 2. Walls 3. Floor
4. Foundation 5. Roof 6. Room
(a) 4,1,5,6,2,3 (b) 4,2,1,5,3,6 (c) 4,3,5,6,2,1 (d) 4,5,3,2,1,6

27. 1. Puberty 2. Adulthood 3. Childhood
4. Infancy 5. Senescence 6. Adolescence
(a) 2,4,6,3,1,5 (b) 4,3,1,6,2,5 (c) 4,3,6,2,1,5 (d) 5,6,2,3,4,1

28. 1. District 2. Village 3. State 4. Town 5. City
(a) 2,4,1,5,3 (b) 2,1,4,5,3 (c) 5,3,2,1,4 (d) 2,5,3,4,1

29. 1. Presentation 2. Recommendation 3. Arrival
4. Discussion 5. Introduction
(a) 3,5,1,4,2 (b) 3,5,4,2,1 (c) 5,3,1,2,4 (d) 5,3,4,1,2

30. 1. Cutting 2. Dish 3. Vegetable 4. Market 5. Cooking
(a) 1,2,4,5,3 (b) 3,2,5,1,4 (c) 4,3,1,5,2 (d) 5,3,2,1,4

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31. 1. Never 2. Sometimes 3. Generally 4. Seldom 5. Always
(a) 5,2,1,3,4 (b) 5,2,4,3,1 (c) 5,3,2,1,4 (d) 5,3,2,4,1

32. 1. Table 2. Tree 3. Wood 4. Seed 5. Plant
(a) 1,2,3,4,5 (b) 1,3,2,4,5 (c) 4,5,2,3,1 (d) 4,5,3,2,1

33. 1. Doctor 2. Fever 3. Prescribe 4. Diagnose 5. Medicine
(a) 1,4,3,2,5 (b) 2,1,3,4,5 (c) 2,1,4,3,5 (d) 2,4,3,5,1

34. 1. Income 2. Status 3. Education 4.Well-being 5. Job
(a) 1,2,5,3,4 (b) 1,3,2,5,4 (c) 3,1,5,2,4 (d) 3,5,1,2,4

35. 1. Hecto 2. Centi 3. Deca 4.Kilo 5. Deci
(a) 1,3,4,5,2 (b) 1,5,3,4,2 (c) 2,5,3,1,4 (d) 5,2,1,4,3

36. 1. Index 2. Contents 3. Title 4.Chapters 5. Introduction
(a) 2,3,4,5,1 (b) 3,2,5,1,4 (c) 3,2,5,4,1 (d) 5,1,4,2,3

37. 1. Patient 2. Diagnosis 3. Bill 4.Doctor 5. Treatment
(a) 1,4,2,3,5 (b) 1,4,3,2,5 (c) 1,4,2,5,3 (d) 4,1,2,3,5

38. 1. Milky Way 2. Sun 3. Moon 4.Earth 5. Stars
(a) 1,4,3,2,5 (b) 2,3,4,5,1 (c) 3,4,2,5,1 (d) 4,3,2,5,1

39. 1. Sea 2. Rivulet 3. Ocean 4. River 5. Glacier
(a) 5,2,1,3,4 (b) 5,2,4,1,3 (c) 5,4,2,3,1 (d) 5,4,3,2,1

40. 1. Probation 2. Interview 3. Selection
4. Appointment 5. Advertisement 6. Application
(a) 5,6,2,3,4,1 (b) 5,6,3,2,4,1 (c) 5,6,4,2,3,1 (d) 6,5,4,2,3,1

41. Which would be the proper order of the following in (ascending order)
1. Trillion 2. Thousand 3. Billion 4.Hundred 5. Million
(a) 1,2,4,3,5 (b) 1,5,3,2,4 (c) 4,2,3,5,1 (d) 4,2,5,3,1

42. Which of the following number sequences represents a correct sequence from a part to the whole?
1. Caste 2. Family 3. Newly married couple
4.Clan 5. Species
(a) 2,3,1,4,5 (b) 3,2,1,4,5 (c) 3,4,5,1,2 (d) 4,5,3,2,1

43. Arrange the following items from general to particular
1. Animal 2. Feline 3. Leopard
4. Mammal 5. Vertebrate
(a) 1,2,3,4,5,6 (b) 1,3,5,4,2,6 (c) 1,4,3,2,5,6 (d) 1,5,4,2,3,6

ANSWERS (EXERCISE 1)

1.	c	2.	d	3.	d	4.	b	5.	d	6.	c	7.	a	8.	c	9.	b	10.	c
11.	b	12.	b	13.	d	14.	c	15.	b	16.	c	17.	c	18.	b	19.	d	20.	d
21.	d	22.	b	23.	a	24.	c	25	c	26.	b	27.	b	28.	a	29.	a	30.	c
31.	d	32.	c	33.	c	34.	d	35.	c	36.	c	37.	c	38.	c	39.	b	40.	a
41.	d	42.	b	43.	d														

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Chapter 12

VERIFICATION OF TRUTH OF THE STATEMENT

In this type of questions, the candidate is required to stress only on truth of the facts that always hold. Questions are asked in context of a particular thing or factor that is always characterized by a specific part or feature. The alternatives other than the correct answer also seem to bear a strong relationship with the thing mentioned. So, absolute truth is to be followed.

ILLUSTRATIVE EXAMPLES

Example 1: Atmosphere always has

(a) Oxygen (b) Air (c) Germs (d) Moisture (e) Dust

Solution. Clearly, though all the alternatives may from a part of the atmosphere, the air is the most vital part, without which there can be no atmosphere. So, the answer is (b).

Example 2: A train always has

(a) Engine (b) Rails (c) Driver (d) Guard (e) Passengers

Solution. Clearly, rails are necessary for the train to move on. Driver alone can move the train. A guard is also necessary for safety. A train is moved for the passengers. But all these do not constitute a train. A train cannot be called so without the engine. So, the answer is (a).

Example 3: Which one of the following is always found in 'Bravery'?

(a) Courage (b) Experience (c) Power (d) Knowledge

Solution. Clearly, 'bravery' is a quality exhibited only by a person who possesses courage. So, the answer is (a).

PRACTICE EXERCISE

Directions: ***Choose the best alternative as the answer.***

1. Which of the following an animal always has?
   (a) Lungs (b) Skin (c) Mind (d) Heart (e) Life
2. A race always has?
   (a) Reference (b) Spectators (c) Rivals (d) Prize (e) Victory
3. Which of the following a 'Drama' must have?
   (a) Actors (b) Story (c) Sets (d) Director (e) Spectators
4. A book always has?
   (a) Chapters (b) Pages (c) Contents (d) Pictures (e) Illustrations
5. A mirror always?
   (a) Reflects (b) Retracts (c) Distorts (d) Refracts (e) Reveals the truth
6. A factory always has
   (a) Electricity (b) Chimney (c) Workers (d) Files (e) Sellers
7. A clock always has
   (a) Battery (b) Numbers (c) Alarm (d) Needles (e) Frame
8. A car always has
   (a) Driver (b) Bonnet (c) Dicky (d) Bumper (e) Wheels
9. A river always has
   (a) Delta (b) Tributaries (c) Boats (d) Banks (e) Fishes
10. A tree always has which of the following?
    (a) Branches (b) Leaves (c) Fruits (d) Roots (e) Shadow
11. A jail always has
    (a) Bars (b) Jailor (c) Lawyer (d) Locks (e) Prisoners
12. A camera always has
    (a) Lens (b) Reels (c) Flash (d) Photographer (e) Stand

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13. An oasis always has
(a) Traveler (b) Water (c) Sand (d) Camels (e) Forests

14. A hospital always has
(a) Nurse (b) Room (c) Telephone (d) Doctor (e) Bed

15. A bulb always has
(a) Filament (b) Light (c) Glass (d) Current (e) Argon

16. A scenery always has
(a) Paints (b) Mountains (c) Rivers (d) Composition (e) Painter

17. A school always has
(a) Principal (b) Building (c) Library (d) Teacher (e) Classes

18. A pen always has
(a) Clothes (b) Cap (c) Holder (d) Ink (e) Nib

19. A cupboard always has
(a) Clothes (b) Door (c) Shelf (d) Bolt (e) Lock

20. Which of the following is always with bargin
(a) Sumptuousness (b) Exchange
(c) Triviality (d) Eloquence (e) Profit

21. The dead have no
(a) Sensation (b) Heartbeats (c) Bones (d) Breathing (e) Movement

22. A newspaper always has
(a) Advertisement (b) News (c) Editor (d) Paper (e) Date

23. Cricket always has
(a) Stumps (b) Pitch (c) Glove (d) Pads (e) Bat

24. A man always has
(a) Teeth (b) Feet (c) Eyes (d) Hands (e) Heart

25. A fan always has
(a) Switch (b) Blades (c) Current (d) Wire (e) Regulator

26. A disease always has
(a) Cure (b) Medicine (c) Cause (d) Germs (e) Patient

27. Which of the following is associated with diamond?
(a) Hardness (b) Brilliance (c) Use (d) Conductivity (e) Sharpness

28. All animals have
(a) Eyes (b) Four legs (c) Horns (d) Instincts (e) Tails

29. Danger always involves
(a) Enemy (b) Attack (c) Fear (d) Help

30. A mountain always has
(a) Ranger (b) Peak (c) Snow (d) Valley

31. Milk always contain
(a) Sugar (b) Fats (c) Calcium (d) Water

32. Which of the following is always associated with justice?
(a) Hypocrisy (b) Magnanimity (c) Legitimacy (d) Diminutiveness

33. A chocolate always has
(a) Wrapper (b) Cocoa (c) Nuts (d) Milk

34. What is always in worry?
(a) Difficulty (b) Unrest (c) Non-cooperation (d) Poignancy

35. A shoe always has
(a) Laces (b) Leather (c) Design (d) Sole

36. Quilt always has
(a) Cotton (b) Cover (c) Print (d) Tags

37. A hill always has

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(a) Trees (b) Animals (c) Water (d) Height

38. A window always has
(a) Curtain (b) Panes (c) Grill (d) None of these

39. A song always has
(a) Chorus (b) Musician (c) Tymbal (d) Word

40. A controversy always involves
(a) Dislike (b) Injustice (c) Passion (d) Disagreement (e) Anger

41. A child must have had
(a) Toys (b) Friends (c) Parents (d) Education

42. A lotus flower always has
(a) Petals (b) Mud (c) Roots (d) Water

ANSWERS

1.	e	2.	c	3.	b	4.	b	5.	a	6.	c	7.	d	8.	e	9.	d	10.	d
11.	d	12.	a	13.	b	14.	d	15.	a	16.	d	17.	d	18.	e	19.	c	20.	b
21.	e	22.	b	23.	e	24.	e	25	b	26.	c	27.	a	28.	d	29.	c	30.	b
31.	c	32.	c	33.	b	34.	b	35.	d	36.	a	37.	d	38.	d	39.	d	40.	d
41.	c	42.	a																

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Chapter 13

COMMONSENSE TEST

In this type, the candidates are required to make use of their commonsense only. They have to draw upon their own experience to arrive at the answer.

EXERCISE

1. Which is heavier of the two—a pound of feather or a pound of gold?
(a) feather (b) gold
(c) neither

2. It takes two minutes to boil an egg. How many minutes will it take to boil 5 eggs together?
(a) 2 (b) 10
(c) 12 (d) 5

3. While weaving a shawl, the layers in one direction are 2 inches white and 2 inches red, and the layers in the other direction are 2 inches white and 2 inches green. What will the pattern of the shawl be composed of?
(a) Squares of two colours
(b) squares of three colours
(c) squares of four colours
(d) Rectangle of four colours

4. 4 boys and 3 girls do as many sums in 5 minutes as 3 boys and 5 girls do in 4 minutes. Who works faster?
(a) boys (b) girls
(c) neither (d) both equal

5. A clock seen through a mirror reads a quarter to nine. What is the actual time?
(a) 1.15 (b) 9.30
(c) 3.15 (d) 9.15

6. If a cricket match starts at 10.00 A.M. in England, at what time can we hear its commentary on the wireless in Pakistan?
(a) 10.00 P.M (b) 4.30 P.M
(c) 3.00 P.M (d) 2.30 P.M

7. Suppose an air-conditioned tunnel is dug through the earth. Its one end is in Pakistan and the other is in Brazil. It passes through the center of gravity. A piece of stone is dropped into it. What will happen to the stone?
(a) It will come out at the other end
(b) Can't say
(c) It will keep on moving from end to end inside the tunnel

8. A child learning alphabet (English) can draw only straight lines. How many capital letters can he write?
(a) 10 (b) 12
(c) 15 (d) 18

9. The students of the same. I.Q., age, educational qualification start pronouncing all the letters of the alphabet—one from A to Z and the other from Z to A. who will finish the count first?
(a) He who counts from A to Z
(b) He who counts from Z to A
(c) Both will finish together

10. The number of letters in English alphabet is 26. If the number of consonants were equal to the number of vowels and the number of vowels of consonants. What will be the total number in that case?
(a) Less than 26 (b) More than 26
(c) None of these (d) Can't say

11. A counts the letters in the alphabet, leaving out vowels. B counts the letters leaving out the 5th letter every time. whose count is more?
(a) A's (b) B's
(c) Equal (d) Can't say

12. There are two camels—one facing The East and the other facing the West. A truss of hay is placed between them. Can they eat grass without moving their legs?
(a) Yes (b) No
(c) Can't say

13. An electric train is running from East to West. It is windy day. The wind is blowing from West to East. In which direction will be smoke go?
(a) West to East (b) East to West
(c) North to South (d) None of these

14. Suppose you can jump 5.5 ft. high. After eating two slices of bread, how high can you jump? Your weight is 50 kg.

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(a) More than 5.5 ft. (b) Less than 5.5 ft.
(c) Same height (d) Can't say

15\. A man had 11 buffaloes. All but seven died. How many were left?
(a) 18 (b) 11
(c) 4 (d) None of these

16\. The front wheels of a tractor are smaller than the rear wheels. Which of them travel faster?
(a) Front wheels
(b) Rear wheels
(c) Both of them have equal speed
(d) Can't say

17\. Take any number, subtract from it the sum of its digits, the result will always be divisible by:
(a) 5 (b) 7
(c) 9 (d) 11

18\. Mr. Aslam, after extracting a promise from his pretty secretary that she would only answer in 'yes' or 'no' said to her, "You will not say 'no' if I asked you to spend the evening with me." He had her company for the evening because:
(a) She wanted to go, so she said 'yes'
(b) She had no choice as both 'yes' and 'no' meant the same
(c) She had refused yet the boss took her
(d) None of the above

19\. In 2 hours, the minute hand of a clock rotates through an angle of:
(a) 60° (b) 720°
(c) 360° (d) 180°

20\. It took 20 days for all the leaves to fall from a tree. If the number of leaves that fell each day was twice that of the previous day, on which day was the tree half bare?
(a) 10th day (b) 19th day
(c) 9th day (d) None of these

21\. A wheel has 16 spoken. How many spaces are there between the spokes?
(a) 16 (b) 15
(c) 17 (d) Can't say

22\. Fida bought a camera and case for Rs. 120. If the camera costs Rs. 100 more than the case; how much did the camera cost?
(a) Rs. 100 (b) Rs. 110
(c) Rs. 120 (d) Rs. 90

23\. Two boys were overhead discussing the number of pets each had. First boy: "If I had one of yours, I would have as many as you." Second boy: "If I had one of yours, I would have twice as many as you." How many pets does each boy have?
(a) 5,7 (b) 3,5
(c) 2,4 (d) 5,3

24\. If 12 years are added to 2/3 age of Rani, she will be three years older than today. What is Rani's present age--
(A) 25 (B) 27
(C) 26 (D) 29

25\. A cyclist covers half as much distance again as a tonga driver, and the tonga driver half as much again as a man on foot. If a man can walk a distance of 3 km in one hour how much will it take a cyclist to cover a distance of 27 km--
(A) 3 hours (B) 3 ½ hours
(C) 4 hours (D) 4 ½ hours

26\. I drove south for 6 km, then turned left and drove for 2 km and then turned right and drove for 4 km again turned right and drove 2 km. How far am I from my starting point-
(A) 2 km (B) 4 km
(C) 10 km (D) 12 km

27\. I am sixth in a queue numbering from either end. How many are there in the queue?--
(A) 11 (B) 9
(C) 7 (D) 13

28\. In a cage there are rabbits and pigeons. They have 20 heads and 48 feet. How many rabbits are there--
(A) 6 Rabbits (B) 4 Rabbits
(C) 8 Rabbits (D) 10 Rabbits

29\. A clock seen through a mirror reads quarter past three. What is the correct time--
(A) Quarter to 9 (B) 15 past 9
(C) 15 to 3 (D) None of the above

30\. If a man stands upside down with his face towards South where will be his left hand point--
(A) East (B) West
(C) North (D) South

31\. My watch which loses 2 minutes in 24 hours showed correct time at 11.A.M. How many seconds could it have lost by 7. P.M.--
(A) 30 Sec (B) 50 Sec

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(C) 40 Sec (D) 20 Sec

32. A party consisted of a man and his wife, their two sons and their wives and four children of each son. How many persons were their in all the party?–
(A) 24 (B) 14
(C) 34 (D) 16

33. A boy had twice as many sums wrong as right. If he had 24 sums in all how many of them were wrong?--
(A) 18 (B) 20
(C) 16 (D) 15

34. If Sunday dawned 3 days before yesterday what day will dawn two days after tomorrow-
(A) SUNDAY (B) SUNDAY
(C) MONDAY (D) None of the above

35. A man starts climbing a hill. Every minute he ascends 20 yards but slips down 5 yards. How long will he take to ascend a pt 80 yards high–
(A) 5 minutes
(B) 5 minutes 20 seconds
(C) 6 minutes
(D) None of the above

36. An insect starts climbing a wall 11 feet high at 10. a.m. Every minute it ascends 10 feet but descends 6 inches. At what time will it reach the top—
(A) 10.19 a.m (B) 10.20 a.m
(C) 10.21 a.m (D) 10.22 a.m

37. In a class of 33, the boys outnumber the girls by Seven. How many girls are there ?
(A) 13 (B) 26
(C) 40 (D) 47

38. One is nearest to which of the following:--
(A) 9/14 (B) 15/19
(C) 0.74 (D) 0.63

39. There are four numbers. Average of the first three is 15 and that of the last three is 16. If the last number is 19 find the first number--
(A) 16 (B) 18
(C) 20 (D) 21

40. "Horse Powers' is a standard unit of power equal to:
(A) 370 watts (B) 480 watts
(C) 658 watts (D) 746 watts

41. At 12 O' clock noon Pakistan Standard time, the time in London (U.K) Shall be--
(A) 4.00 p.m. (B) 7.a.m.
(C) 5.00 p.m. (D) 4.00 a.m.

42. If the Doctor gave you 4 tablets and advised you a take each tablet every half an hour, how long will you take to eat all tablets?
(A) 2 hours (B) 1 ½ hours
(C) 2 ½ hours (D) None of the above

43. It takes 2 minutes to boil a single egg. How many minutes will it take to boil 5 eggs together:
(A) 2 minutes (B) 5 minutes
(C) 8 minutes (D) 10 minutes

44. If Sajid stood on the top step of a ladder and there were six more steps the midway step, how many steps in all did the ladder comprise of:
(A) 10 (B) 12
(C) 14 (D) 16

45. How many different three-digit numbers can be formed by 3 and 5, if none of them is repeated in a number:
(A) 2 (B) 3
(C) 4 (D) 5

ANSWERS

1.	C	2.	A	3.	A	4.	B	5.	C
6.	C	7.	C	8.	C	9.	A	10.	C
11.	C	12.	A	13.	D	14.	C	15.	D
16.	C	17.	C	18.	B	19.	B	20.	B
21.	A	22.	B	23.	A	24.	B	25.	C
26.	C	27.	A	28.	B	29.	A	30.	A
31.	C	32.	B	33.	C	34.	A	35.	A
36.	C	37.	A	38.	C	39.	A	40.	D
41.	B	42.	A	43.	A	44.	C	45.	C

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Chapter 14

DIRECTION SENSE TEST

The object of this type of test is to ascertain the sense of direction in the candidates. They are required to use their sense about the direction and answer the given questions correctly.

The adjoining figure shows the four main direction [North (N), South (S), East (E), West (W) and the four cardinal [North East (NE), North West (NW), south East (SE), South West (SW)] to help the candidates know the director.

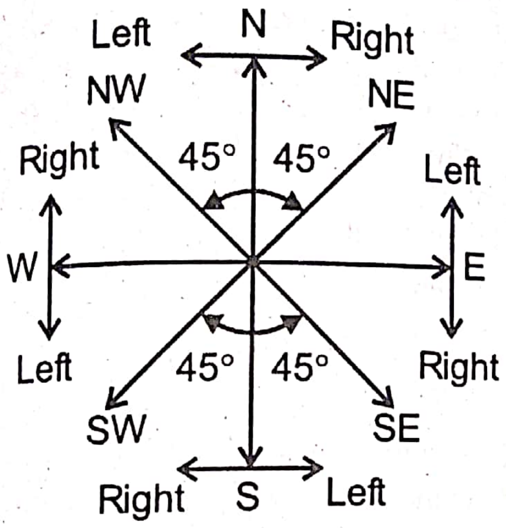
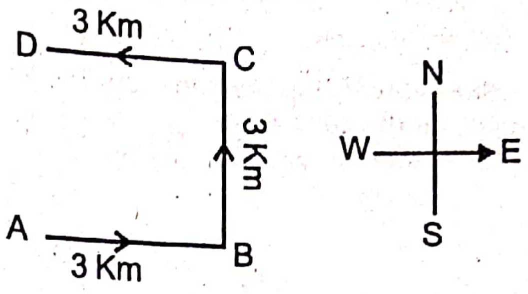


Illustration 1. After starting from a point, a man walks 3 KM towards East, then turning to his left he moves 3 km. After this he again turns left and moves 3 km. Which choice given below indicates the correct direction in which he is from his starting point?

(a) North (b) East
(c) West (d) South
(e) None of these

Answer with Explanation (A) — The person starting from a reaches at B after moving 3 km towards East.

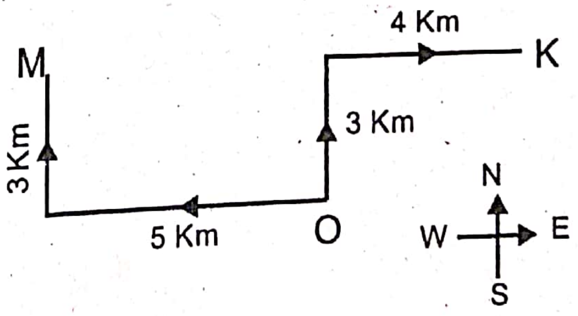


Then turning to left at B, he reaches to C after moving 3 km. Then again turning to left at C, he reaches to D after moving 3 km. Since D is in the north direction of A. Hence the correct answer is (A).

Illustration 2: A and B started from a fixed place. A moves towards North and after walking 3 km turns to this rights and covers 4 Km B moves towards West and walks 5 km and then turns to his right and walks 3 km Now how far A and B are from each other?

(a) 5 km
(b) 9 km
(c) 8 km
(d) 4 km
(e) 1 km

Answer with Explanation – (B). The movements A and B are shown in the following diagram.



Starting from O, the final positions of A and B are K and M respectively. Since the distance between K and M is 5 + 4 i.e. 9 km. Hence the correct answer is (B).

Illustration 3: Village A is on the west of Village B. Village C is on the east of Village A. Village D is on the west of Village B. Village C is on the east of Village B. If Village D is on the west of

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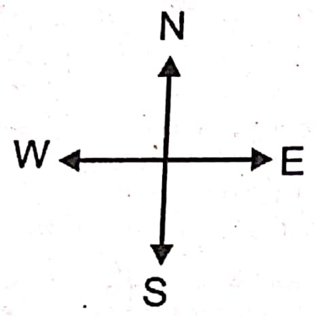
Village A, in which direction of Village C in Village D?

(a) North (b) West
(c) East (d) South
(e) None of these

Answer with Explanation – (B). The position of various towns is as follows.

Village D, Village C, Village A, Village B

□ □ □ □



QUESTIONS WITH ANSWERS EXPLAINED

1. Rashid started walking towards South after walking 15 metres he turned to the left and walked 15 metres. He again turned to his left and walked 15 metres. How far is he from his original position and in which direction?

(A) 15 metres North

(B) 15 metres South

(C) 30 metres East

(D) None of these

2. Nadeem faces towards East. Turning to his right he walks 50 metres and then turning to his left, he walks 50 metres. After this he turns to his right and walks 50 metres. Again he turns to his right and walks 100 metres. Finally he turns to his right and walks 100 metres. Now in what direction is he from his starting point?

(A) East

(B) West

(C) North

(D) South

3. If South–East becomes North and North–East becomes West and all the rest directions are changed in the same manner, then what will be the direction for West?

(A) North–East

(B) South

(C) South–East

(D) South-West

4. If Rahim moves 20 metres in East direction and then turns to his left and then moves 15 metres and then he turns to his right and moves 25 metres. After this he turns to his right and moves 15 metres. Now how far is he from his starting point?

(A) Zero metre

(B) 40 metres

(C) 50 metres

(D) 25 metres

5. Akram starts from his office facing west and walks 100 metres straight then takes a right turn and walks 100 metres. Further he takes a left turn and walks 50 metres. In which

direction is Akram now from the starting point?

(A) North-East

(B) South-West

(C) North

(D) South-East

6. A station director drives a car for 15 Km to the West from the radio-station. Then he turns left and goes 10 Km. After this he turns right and goes for 18 Km. Now in which direction is she going?

(A) North-East

(B) South-West

(C) West

(D) North-East

7. Which of the following turning sequences will make one who started walking towards East walk towards South?

(A) Left, Left, Left

(B) Left, Left, Right

(C) Right, Right, Right,

(D) Left, Right, Left

8. Rani and Shamim started from a place X. Rani went West and Shamim went North, both travelling with the same speed. After sometime both turned their left and walked a few steps. If they again turned to their left, in which directions the faces of Rani and Shamim will be with respect to X.

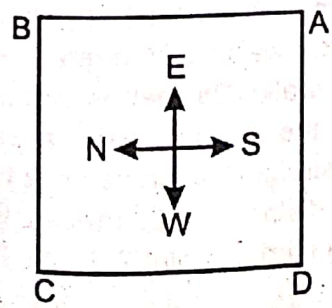
(A) North and East

(B) North and West

(C) West and North

(D) East and South

9. A, B, C and D are standing on the four corners of a square field as shown in the figure given below:



(A) North-East

(B) South-West

(C) South-East

(D) North-West

10. While standing on his head, Anwar's ace is towards South. In which direction will his right hand point?

(A) North-East

(B) North

(C) East

(D) South-East

11. A man travels 12 km west then 3 km towards south, then 8 km towards east. How far he is from the start ?

(A) 23 km

(B) 20 km

(C) 15 km

(D) 5 km

12. If both A, B, C, D and P, Q, R, K move clockwise three plots, then who would he positioned North-East and South-West ?

(A) A and P

(B) C and P

(C) D and Q

(D) B and R

13. If A, B, C and D move clockwise two plots while P, Q, R and K move vertically up two plots then which policeman will be able to catch an offender?

(A) A

(B) B

(C) C

(D) D

14. Azam goes 30 metres North then turns right and walks 40 metres, then again turns right and walks 20 metres, then again turns right and walks 40 metres. How many metres is he from his original position?

(A) 0

(B) 10

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(C) 20

(D) 40

15. The door of Saeed's house is towards the east. From the backside of the house, he walks straight 100 yards then turns towards right and walks 100 yards again and after that turns towards left and stops after walking 50 yards. Now Saeed is in which direction from the starting point?

(A) South-East

(B) North-West

(D) North-East

(D) South-West

16. Rozina started to walk to east in an open field and she stopped after walking 35 metres. Then she turned to her right and walked 15 metres. How much minimum distance she would cover to reach her starting place?

(A) 25m

(B) 20m

(C) 30m

(D) None of these

17. A policeman goes straight seven (7) kilometers eastwards, then turns right and goes straight three (3) kilometres and turns right again and goes straight ten (10) kilometres. In which direction is he from the starting point?

(A) South-West

(B) North-West

(C) North-East

(D) South-East

18. If A is in the North of B and C is in the West of B. In what direction is A with respect to C?

(A) North-East

(B) East

(C) South

(D) None of these

19. Sub-Inspector Rahim travelled from his Police-post straight 400 metres. He then turned left and travelled 500 metres straight after which he turned left again and travelled for 400 metres straight. He then turned right and walked for another 600 metres straight. How far is he from the Police-post ?

(A) 1.0 km

(B) 1.1 km

(C) 1.4 km

(D) 1.8 km

20. Rashid started early in the morning on the road 'towards the Sun. After sometime he turned to his left. Again after sometime he turned to his right. After moving some distance he again turned to his right and began to move. At this time in what direction was he moving ?

(A) East

(B) North-East

(C) North-West

(D) South

(E) None of these

21. From a point P, Samir started walking towards South and walked 40 metres. He then turned; towards his left and walked 30 metres and reached a point Q. The point Q is at what minimum distance and at what direction from the point P.

(A) 50 metres South-West

(B) 45 metres South-East

(C) 50 metres South-East

(D) 35 metres South-East

(E) None of these

22. If A, B, C and D were to move clockwise four plots and P, Q, R and K were to move anti-clockwise six plots, then who two would be North and South ?

(A) P and A

(B) R and D

(C) Q and B

(D) P, and C

23. Muzammil starts walking straight towards East. After walking 75 metres he turns to the left and walks 25 metres straight. Again he turns to the left and walks a distance of 40 metres straight. Again he turns to the left and walks a distance of 25 metres. How far is he from the starting point ?

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(A) 140 metres
(B) 50 metres
(C) 35 metres
(D) 115 metres
(E) None of these

24. Sarwar travelled 9 km to the west, then turned right and travelled 7 km, then turned left and travelled 8 km, then turned back and travelled 11 km, then turned right and travelled 7 km. How far is he from the starting point ?

(A) 3 km
(B) 6 km
(C) 7 km
(D) 9 km

25. A boy rode his bicycle northwards, then turned left and moved one km and again turned left and rode 2 km. He found himself exactly one km west of his starting point. How far did he ride northwards initially ?

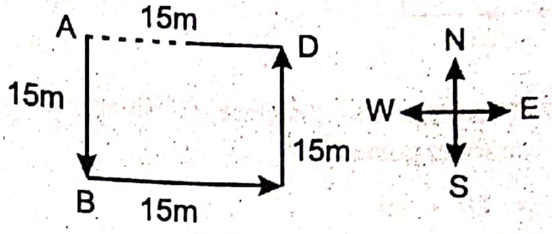
(A) 1 km
(B) 3 km
(C) 2 km
(D) 5 km

26. The time by Adnan's watch is half past three. If the hour hand points towards East, to which direction would minute hand point?

(A) North
(B) East
(C) South-East
(D) None of these

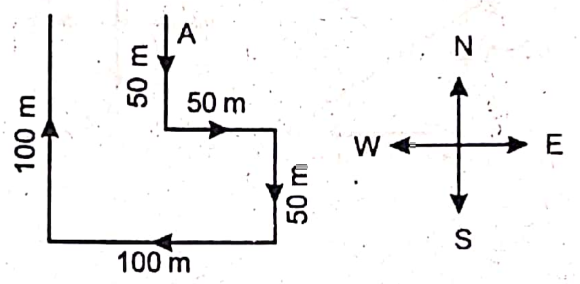
ANSWERS

1. (E) The route of Rashid is as given below:



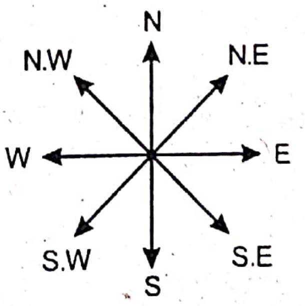
Thus Rashid is 15 metres East from his initial position.

2. (B) As Nadeem faces towards East and he walks turning to his right, therefore, he starts to walk in the direction of South. His movements are as follows:



Hence he will be in the direction of West from his starting point.

3. (C) If South—East becomes North and North—East becomes West, therefore, the whole figure moves through 135°. Hence West will be the South—East.



4. (E) Movements of Rahim are as follows 25 m.

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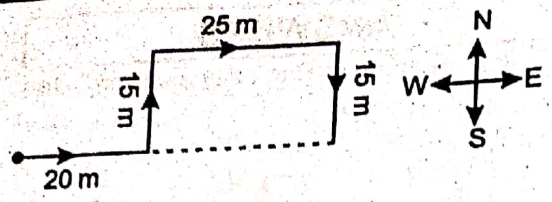
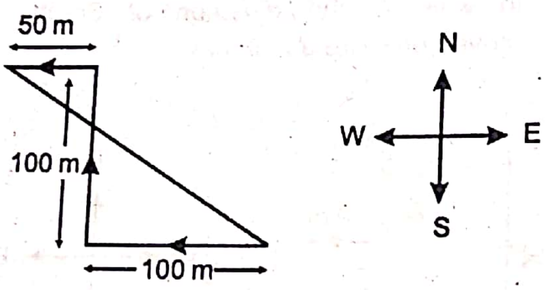


Therefore the distance of Rahim from his starting point.

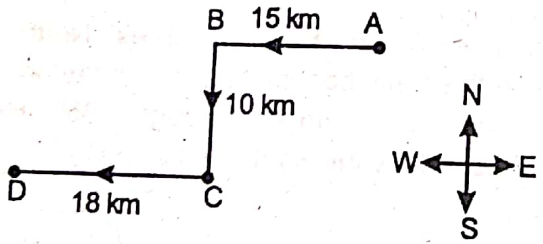
= 20 + 25

= 45 metres

5. (D)

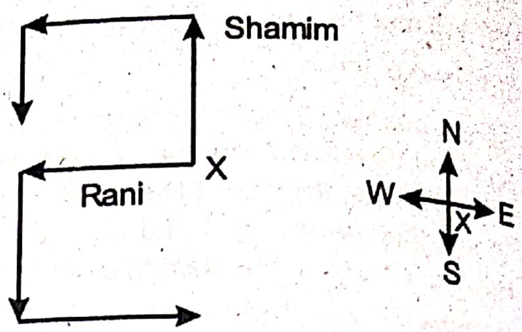


6. (C) The movement of the station director is as given below:



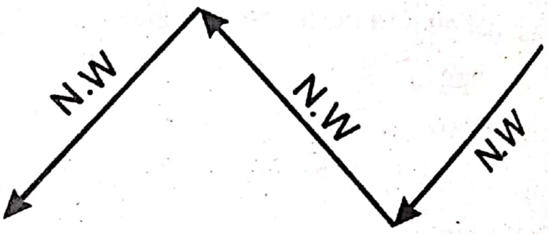
7. (A)

8. (C) Movements of Rani and Shamim are follows:



Hence it is clear from the figure that Rani's face and Shamim's face will be towards West and North respectively with respect to X.

9. (D) Movements of A are as follows :

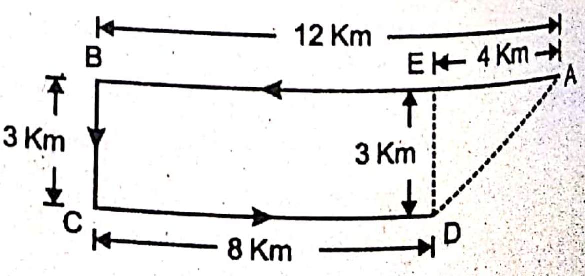


Hence finally A is facing in the direction of North-West.

10. (C) Since standing on his head Anwar's face is towards South, therefore, his right hand will be in the direction of East.

11. (D) Distance from the

Start = AD



$= \sqrt{AE^2 + DE^2}$

$= \sqrt{16 + 9}$

= 5 Km

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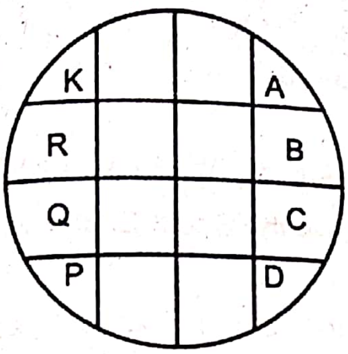
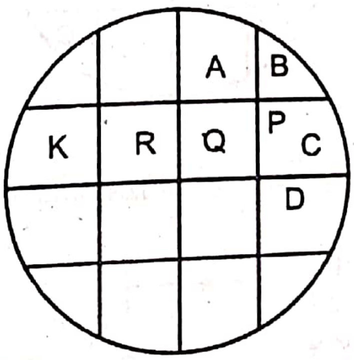
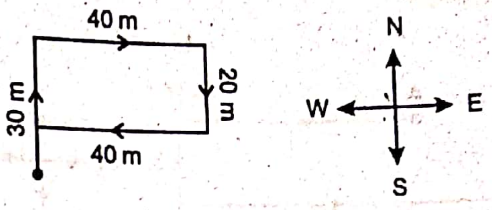
12. (A) After the movement according the question their positions are as follows:



13. (C) After the movement according the question their positions are as follows:



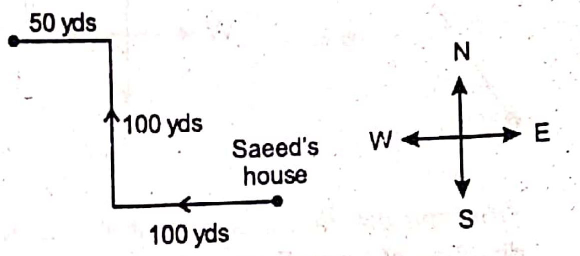
14. (B) Movements of Azam are as follows:



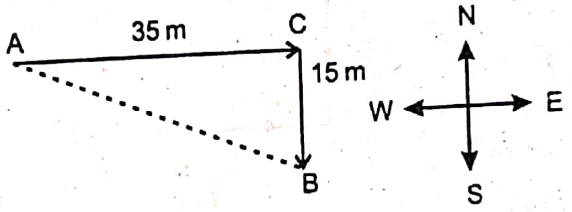
His distance from his original position

$= 30 - 20 = 10$ m

15. (B) Movements of Saeed are shows below:



16. (E) Movement of Rozina is thus:



$= \sqrt{(AC)^2 + (BC)^2}$

$= \sqrt{(35)^2 + (15)^2}$

$= \sqrt{1225 + 225}$

$= \sqrt{1450}$ m

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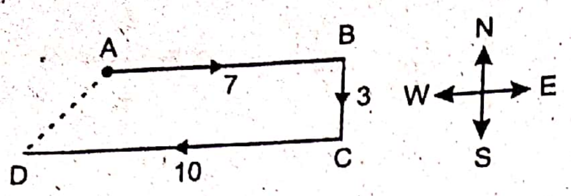
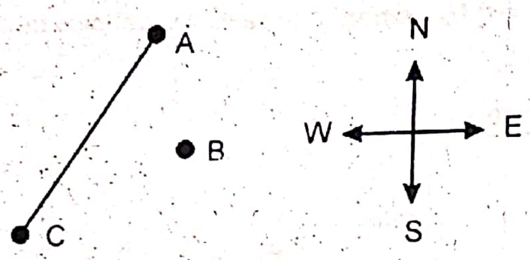
17. (A) The route of the policeman is as given below:

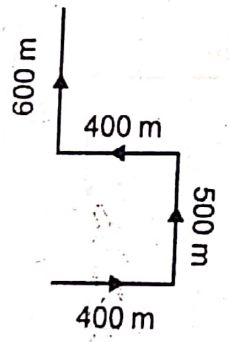


18. (A)

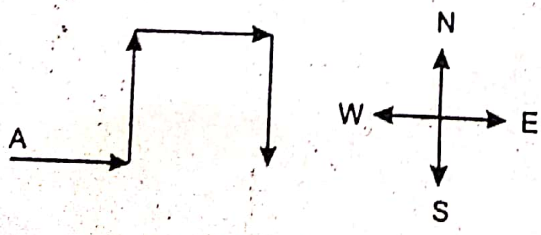


From the diagram it is clear that A is in the direction of North-East of C.

19. (B) Reqd. distance = 600 m + 500 m

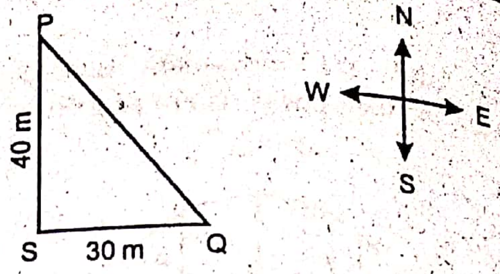


20. (D) Since early in the morning the sun is in the direction of East, therefore, he started in the direction of East. His movements are as follows:



His final movement are in the direction of South.

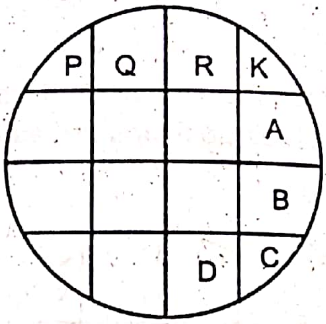
21. (C) The movement of Samir is as given in the diagram.



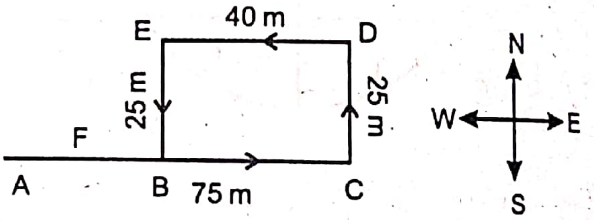
$PQ^2 = 40^2 + 30^2 = 1600 + 900 = 2500$

∴ and Q is in the South-East of P.

22. (B) After the movement according the question their positions are as follows:



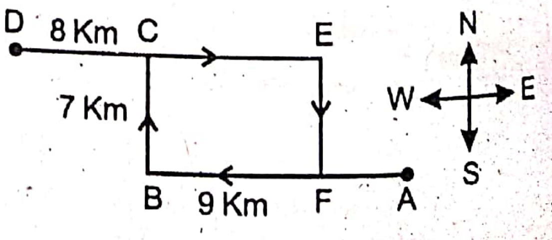
23. (C) Movements of Muzammil are as follows:



His distance from his final position to the starting point = 75 − 40

= 34 metres.

24. (B) Initial position and final position of Sarwar are A and F respectively.



∴ Required distance AF = 6 km.

25. (C) ∴ He rode northwords initially 2 km

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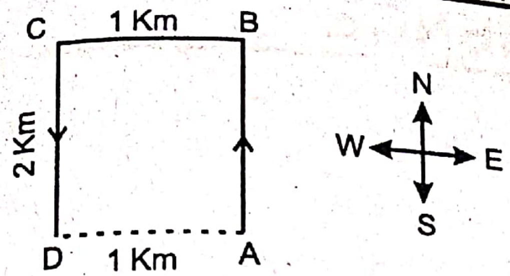
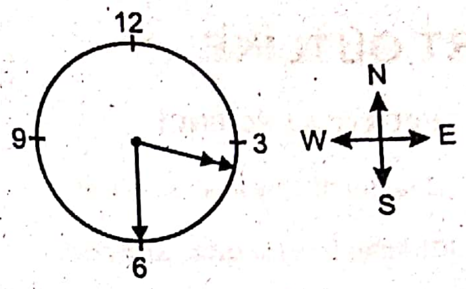


26. (C) The position of the minute hand is as follows:



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EVERYDAY SCIENCE

PART OUTLINE

I. **EVERYDAY SCIENCE**

Chapter 1: Physical Sciences

Chapter 2: Biological Sciences

Chapter 3: Environmental Science

Chapter 4: Food Science

Chapter 5: Information Technology

II. **PAKISTAN AFFAIRS**
CSS Past Papers

III. **CURRENT AFFAIRS**
CSS Past Papers

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Chapter 1

PHYSICAL SCIENCES

GENERAL GEOGRAPHY

AREA AND POPULATION OF CONTINENTS

Continent	Area (km²)	Percent of total landmass	Approx. population 2011	Percent of total population	Density People per km²
Asia	43,820,000	29.5%	4,140,336,501	60.7%	86.7
Africa	30,370,000	20.4%	994,527,534	14.6%	32.7
North America	24,490,000	16.5%	528,720,588	7.7%	22.9
South America	17,840,000	12.0%	385,742,554	5.6%	21.4
Antarctica	13,720,000	9.2%	4,490	0%	0
Europe	10,180,000	6.8%	738,523,843	10.8%	70
Australia	9,008,500	5.9%	36,102,071	0.5%	4.25

The total land area of all continents is 148,647,000 square kilometres (57,393,000 sq mi), or 29.1% of earth's surface (510,065,600 square kilometres/196,937,400 square miles).

HIGHEST AND LOWEST (CONTINENTAL ALTITUDES)

Continent	Highest point	Feet Elevation	Lowest point	Feet Below Sea Level
Asia	Mount Everest (Nepal-Tibet)	29,029	Dead Sea (Israel-Jordan)	−1,384.5
South America	Aconcagua (Argentina)	22,830	Laguna del Carbón (Argentina)	−344.5
North America	Mount McKinley (United States)	20,335	Trough beneath Jakobshavn Isbræ (Greenland)	−4,960.6
Africa	Mount Kilimanjaro (Tanzania)	19,341	Lake Assal (Djibouti)	−508.5
Europe	Mount Elbrus (Russia)	18,481	Caspian Sea (Azerbaijan, Kazakhstan, Russia Iran, Turkmenistan)	−91.9
Antarctica	Vinson Massif (Antarctica)	16,050	Bentley Subglacial Trench (Antarctica)	−8,333.3
Australia	Puncak Jaya (Papua – Indonesia)	16,024	Lake Eyre (South Australia)	−49.2

OCEANS

Name	Area (sq. km)	Sea Area (%)	Average Depth (m)	Greatest Depth (m)
Pacific	155,557,000	45.7	4,280	Mariana Trench, 10,900
Atlantic	76,763,000	22.8	3,926	Puerto Rico Trench, 9,219
Indian	68,556,000	20.3	3,963	Java Trench, 8,047
Southern	20,327,000	8.3	3,456	South Sandwich Trench, 7,236
Arctic	14,056,000	3.9	1,205	Arctic Basin, 5,441

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SEAS

Name	Area (sq km)	Average Depth (m)
South China Sea	2,974,600	5,514
Caribbean Sea	27,53,170	7,492
Mediterranean Sea	25,03,900	4,846
Bering Sea	22,68,200	5,121
Sea of Okhotsk	15,27,000	3,475
East China Sea	12,49,000	2,999
Sea of Japan	10,07,700	3,743
Andaman Sea	7,97,600	865
North Sea	5,75,300	661
Black Sea	4,62,000	2,243
Red Sea	4,37,000	2,246
Baltic Sea	4,22,300	439

IMPORTANT ISLANDS

Name	Location	Area (Sq. Km)
Kalaalit Nunaat (Greenland)	North Atlantic Ocean	21,75,597
New Guinea	Southwest Pacific Ocean	3,20,033
Borneo	West-Central Pacific Ocean	7,43,197
Malaqasv (Madagascar)	Indian Ocean	5,87,042
Baffin	North Atlantic Ocean (Canadian)	4,76,068
Sumatra	Northest Indian Ocean (Indonesia)	4,73,605
New Zealand	South Pacific Ocean	2,70,000
Honshu	Western Pacific Ocean (Sea of Japan)	2,30,316
Great Britain	Atlantic Ocean	2,29,993

PRINCIPAL MOUNTAIN PEAKS

Sr. No.	Name	Continent	Country	Range	Height (m)	Date of First Ascent
1	Mt Everest	Asia	Nepal-Tibet	Himalaya	8,848	May 29, 1953
2	K2 (Godwin Austen	Asia	Pakistan-China	Karakoram	8,611	July 31, 1954
3	Kangchenjunga	Asia	Nepal-India	Himalaya	8,586	May 25, 1955
4	Lhotse	Asia	Nepal-China	Himalaya	8,516	May 18, 1956
5	Makalu	Asia	Tibet-Nepal	Himalaya	8,485	May 15, 1955
6	Cho Oyu	Asia	Nepal-China	Himalaya	8,188	October 19, 1954
7	Dhaulagiri I	Asia	Nepal	Himalaya	8,167	May 13, 1960
8	Manaslu	Asia	Nepal	Himalaya	81,63	May 9, 1956
9	Nanga Parbat	Asia	Pakistan	Himalaya	8,126	July 3, 1953
10	Annapurna I	Asia	Nepal	Himalaya	8,091	June 3. 1950
11	Gasherbrum I	Asia	Pakistan-China	Karakoram	8.080	July 5, 1958
12	Broad Peak	Asia	Pakistan-China	Karakoram	8,051	June 9, 1957
13	Gasherbrum II	Asia	Pakistan-China	Karakoram	8,034	July 8, 1956
14	Shishapangma	Asia	Tibet, China	Himalaya	8,027	May 2, 1964
15	Gyachung Kang	Asia	Nepal-Tibet	Himalaya	7,952	April 10, 1964

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IMPORTANT NATURAL LAKES

Name	Location	Area in sq km	Length km	Water
Caspian Sea	Turkmenistan, Kazakhstan, Azerbaijan, Iran and Russia	3,94,299	1,199	Salt
Superior Lake	USA-Canada	82,414	616	Fresh
Victoria Lake	Uganda, Tanzania and Kenya	69,485	322	Fresh
Aral Sea	Kazakhstan and Uzbekistan	66,457	428	Salt
Huron	USA-Canada	59,596	397	Fresh
Tanganyika	Tanzania-Zaire (Congo)	32,893	676	Fresh
Baikal	Russia	31,500	636	Fresh
Great Bear	Canada	31,080	373	Fresh

IMPORTANT SHIPPING CANALS

Name	Location	Length (km)
Beloye-More	Baltic Sea	227
Gotta	Sweden	185
Suez	Egypt	160
Volga-Moscow	Russia	129
Kiel	Germany	98
Volga-Don	Russia	97
Elbe-Trave	Germany	66
Panama	Central America	58
Manchester	England	57
Welland	Canada	44

TROPICAL DESERTS

Name of Desert	Country	Area (sq km)
Sahara	North Africa	8,400,000
Arabian	Syria and Saudi Arabia	1,300,000
Kalahari	South Africa	520,000
Thar	Pakistan, India	260,000
Taklamakan	China (PMS 2006)	340,000
Australian Desert	Australia	1,550,000
Gobi	Central Asia	1,040,000
Turkamunistan	Central Asia	450,000
Rub'al Khali	Arabia (Saudi Arabia)	647,000
Nubian Desert	North Africa (Egypt)	259,000

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IMPORTANT RIVERS

River	Location / Country	Length in km	Source	Outflow into
Nile	Africa/Egypt	6,670	Lake Victoria	Mediterranean
Amazon	South America/ Brazil	6,448	Andes in Peru	Atlantic Ocean
Missouri-Mississippi	North America/US	6,300	Red Rock Montana	Gulf of Mexico
Yangtze-Kiang	Asia/China	5,490	Tibetan Plateau	East China Sea
Yenisei	Asia/Siberia	5,300	Ml Tannuola	Arctic Ocean
Hawang-Ho	Asia/China	4,840	Tibet	Pacific Ocean
Lena	Europe/Russia	4,800	Lake Baikal	Laptev Sea of Arctic Ocean
Niger	Africa/Nigeria	4,800	Sierra Leone	Gulf of Guinea (Atlantic)
Congo	Africa/Zaire	4374	Confluence of Lualuba and Luapula	Atlantic
Ob	Asia/Siberia	4,150	Altai Mts	Gulf of Ob (pacific)
Brahmaputra	Asia/India	2,960	Tibet	Bay of Bengal
Indus	Asia/India and Pakistan	2,900	Mt Kailash	Arabian Sea
Danube	Europe/Austria, Hungary, Czech, Slovakia and Yugoslavia	2,820	Near Baden in Germany	Black Sea
Murray	Australia	3,720	Alpanean Lake	Indian Ocean
Volga	Asia/Russia	3,700	Valdai Plateau (Moscow)	Caspian Sea
Amur	Asia/Siberia	4,510	Pamirs	Pacific Ocean at the sea of Okhotsk

MAJOR CROPS

Crop	Type of soil	Type of Climate	Main producing Countries
Wheat	Clayey loam	Cool with fair amount of moisture in the beginning; warm, dry climate nearing harvest time	(1) China (2) USA, Canada, Australia, Turkey, Italy, Pakistan, Germany and Argentina, Russia
Rice	Rich, muddy and saturated in water	Hot and wet climate	(1) China (2) India, Pakistan, Japan, Myanmer, Vietnam, South Korea, Brazil, the Philippines and USA
Sugarcane	Deep, loamy well drained calcareous soil	Hot long rainy season	(1) Brazil (2) India, Cuba, China, Mexico, Pakistan, Columbia, Australia and South Africa
Cotton	Black Soil (cotton soil)	Warm; moderate rainfall during growing season	(1) China (2) USA, Russia, India, Pakistan, Turkey, Brazil, Egypt, Mexico. Sudan, Nicaragua, Greece and Guatemala
Tea	Deep, well drained, e. g. hill slopes	Warm and moist	(1) India (2) China Sri Lanka, Russia, Japan, Kenya, Turkey, Indonesia, Bangladesh, Argentina, Uganda
Coffee	Humus, rich in iron and potash, well drained hill slopes	Hot and moist	(1) Brazil (2) Columbia, Ivory Coast, Uganda, Guatemala, Indonesia, El Salvador and India

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IMPORTANT MINERALS AND PRINCIPAL PRODUCING COUNTRIES

Mineral	Countries
Aluminium	Jamaica, Surinam, France, Ghana, USA, Russia, Canada, Germany, Norway, Hungary, India, Greenland
Asbestos	Canada, Zimbabwe, South Africa
Chromium	South Africa, Zimbabwe, Cuba, Pakistan, Kazakhstan, India
Coal	USA, Russia, China, Germany, UK, France, Poland, Belgium, Australia, India, Pakistan
Copper	Chile, USA, Russia, China, Germany, Zambia, Zaire, Canada, Spain, Mexico, Japan, Australia
Gold	China, South Africa, USA, Australia, Canada
Graphite	Sri Lanka
Iron Ore	Russia, USA, Australia, Canada, Sweden, France, Spain India, China, Brazil, Pakistan
Lead	USA, Russia, Spain, Germany, Belgium
Lignite	Germany, Russia
Magnesium	India, Russia, Mexico, Ivory Coast, Pakistan
Mercury	Italy, Spain, USA
Mica	India
Nickel	Canada
Petroleum	Saudi Arabia, Kuwait, Iran, Iraq, Qatar, UAE, Libya, Algeria, Nigeria, Niger, Egypt, USA, Russia, Indonesia
Platinum	Russia, Columbia
Silver	Mexico, Canada, Russia, USA, Australia
Tin	South Africa, China, Malaysia, Bolivia
Uranium	Zaire, South Africa, USA, Canada, Germany, Czech, Slovakia, Russia, India, Kazakhstan, Australia, Pakistan (D.G. Khan)
Thorium (from Monazite)	India, Brazil and USA
Zinc	Canada, Russia, Belgium and Germany

MAJOR INDUSTRIES

Industry	Chief Manufacturing Countries
Iron and Steel	China, USA, Russia, Japan, Germany, UK, France and India
Textiles (Cotton)	China, USA, Pakistan, India, Japan, Russia, UK, Taiwan, Canada, Egypt, France and Italy
Textiles (Woollen)	Russia, UK, Japan, Australia, India, France, Poland, Belgium, Czech Republic, Slovakia, Germany, Bulgaria
Chemicals	USA, Germany, UK, Russia, Japan, Canada, Australia and India
Paper	USA, Canada, Japan, UK, Germany, Sweden. Norway, Finland, Russian and India
Rubber	Thailand, Indonesia, Malaysia, Sri Lanka, India, China, Vietnam, Liberia Nigeria Cote d' Ivoire, Brazil

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PHYSICAL SCIENCES (MCQs)

1. One-hour difference in local time between two places is equivalent to a difference of
   (a) 10° longitude (b) 15° longitude
   (c) 15° latitude (d) 20° latitude
2. The local time at a place is 6 a.m. when the G.M.T. is 3 a.m. the longitude of that place is
   (a) 45 degrees east
   (b) 45 degrees west
   (c) 120 degrees east
   (d) 120 degrees west
3. Upto about 50 km from the earth the atmosphere consists of approximately
   (a) 78% oxygen and 21% nitrogen
   (b) 21% oxygen and 78% nitrogen
   (c) 68% oxygen and 32% nitrogen
   (d) 33% oxygen and 66% oxygen
4. Name the instrument used for measuring humidity
   (a) Barometer (b) Thermometer
   (c) Hygrometer (d) Hydrometer
5. Most of the weather phenomena take place in which of the following layers of the atmosphere?
   (a) Stratosphere (b) Mesosphere
   (c) Ionosphere (d) Troposphere
6. That the earth is rotating on its axis is established by the fact that
   (a) The moon and stars move in the sky
   (b) The earth experiences day and night
   (c) The planetary winds are blowing
   (d) The time in different parts of the earth is not the same
7. Funnel shaped clouds with violent whirl winds are named as
   (a) Tsunami (b) Cirrus
   (c) Tornado (d) Stratus
8. The tropical cyclones often follow the direction of movement from
   (a) South to north (b) East to west
   (c) West to east (d) North to south
9. An upper wind system with very high velocities in the atmospheric is called
   (a) A cyclone (b) An anticyclone
   (c) Monsoon (d) Jet stream
10. The amount of water vapour (grams) in a given volume of air (cubic metre) is known as
    (a) Specific humidity
    (b) Relative humidity
    (c) Vapour pressure
    (d) Absolute humidity
11. Trade winds of the northern hemisphere blow from the north-east to south-west due to:
    (a) Coriolis force
    (b) Gravitational force
    (c) Centripetal force
    (d) None of these
12. Which country is known as Thunderbolt of Asia?
    (a) Bhutan (b) Mongolia
    (c) China (d) None of the above
13. One of the country through which equator passes is?
    (a) Malaysia (b) China
    (c) Malta (d) Pakistan
14. The depletion of ozone layer has been caused mainly by
    (a) the deforestation of large area of land
    (b) the release of chlorofluoro carbons into the atmosphere
    (c) changes in asteroid activity in the solar system
    (d) the release of Industrial waste
15. Which layer of atmosphere provides ideal conditions for flying aeroplanes?
    (a) Troposphere (b) Stratosphere
    (c) Ionosphere (d) Exosphere
16. Through which one of the following countries the equator does not pass?
    (a) Tanzania (b) Kenya
    (c) Zaire (d) Uganda
17. A line on a map joining places of equal monthly or yearly rainfall is
    (a) Isobar (b) Isohyet
    (c) Isotherm (d) Isoneph
18. The Earth revolves around the Sun in an elliptical orbit. Its speed
    (a) Is greatest when it is farthest from the Sun
    (b) Is greatest when it is closest to the Sun
    (c) Remains the same at all points on the orbit
    (d) Goes on decreasing continuously
19. The origin of earth dates back to approximately
    (a) 3.6 billion years
    (b) 4.6 billion years
    (c) 5.6 billion years
    (d) 6.6 billion years

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20. The term 'Ecliptic' is used for the
(a) Sun when eclipsed
(b) Moon when eclipsed
(c) Sun's path in the sky during a year
(d) Path of Earth around the Sun

21. The Sun always rises in the East because
(a) It is located in East
(b) The earth rotates from East to West
(c) The earth rotates from West to East
(d) The earth revolves around the Sun from West to East

22. A ship sailing from Vancouver to Tokyo, crosses the International Date Line on Wednesday, the 8th of November. What will be the next day?
(a) Sixth of November
(b) Seventh of November
(c) Ninth of November
(d) Tenth of November

23. Spring tide occurs when the
(a) Earth, Moon and the Sun are in a straight line
(b) Sun, Earth and the Moon are at right angles to each other
(c) Earth comes near the Sun
(d) Earth is away from the Sun

24. Which of the following words explains a narrow strip of land separating two seas and connecting two landmarks?
(a) Isthmus (b) Strait
(c) Bay (d) Peninsula

25. Presence of which gas in the outer most layer of the atmosphere does not allow ultraviolet rays of the sunlight to reach Earth?
(a) Helium (b) Ozone
(c) Oxygen (d) Chlorine

26. The second largest continent (in terms of area) is
(a) Asia (b) South America
(c) North America (d) Africa

27. South Pole was discovered by
(a) Cabot (b) Robert Peary
(c) Amundsen (d) None of these

28. The dates on which day and night is equal are:
(a) 21st March and 24th December
(b) 14th January and 23rd September
(c) 21st March and 23rd September
(d) 14th January and 22nd June

29. At which place on earth there is always day and night of an equal duration?
(a) On the tropic of Cancer
(b) On the Poles
(c) On the tropic of Capricon
(d) On the Equator

30. A line on a map joining places having equal atmospheric pressure is called
(a) Isotherm (b) Isobar
(c) Isocryme (d) Isolyte

31. The core of the earth is
(a) Of amorphous material
(b) A vacuum
(c) Metallic
(d) Plastic

32. The important country close to International Date Line is
(a) Malaysia (b) Mauritius
(c) New Zealand (d) Surinam

33. Which of the following towns is situated at the highest altitude?
(a) Lhasa (b) Kathmandu
(c) Gartole (d) Thimpu

34. Winter rain in Kashmir is due to
(a) South-West monsoon
(b) Western disturbances
(c) North-East monsoon
(d) Locol winds

35. Which is the longest day in the Northern Hemisphere?
(a) 20th June (b) 21st June
(c) 22nd December (d) 23rd December

36. Equinox refers to
(a) The area near the Equator
(b) A kind of pox affecting horses
(c) Lines connecting points of equal altitude
(d) Two periods in the year when the days and nights are equal

37. The tide at its maximum height is known as
(a) Tsunami (b) Spring tide
(c) Equinoxes (d) Neap tide

38. Where is the coldest place in the world situated?
(a) England (b) Greenland
(c) Russia (d) Antarctica

39. Which place in the world has the least rainfall?
(a) Africa (b) Thar
(c) Mt. Everest (d) Pamir

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40. The International Date Line is an imaginary line extending from pole to pole along the places on the earth's surface and lies along the
(a) 0° meridian (b) 45° meridian
(c) 90° meridian (d) 180° meridian

41. The speed of rotation of the earth is the highest
(a) Along the Equator
(b) Along the Tropic of Cancer
(c) Along the Arctic Circle
(d) At the North Pole

42. World population has reached 7 billion on________, 2011.
(a) January 31 (b) December 31
(c) October 31 (d) March 31

43. About 50% of the world population is concentrated between the latitudes of
(a) 5°N and 20°N (b) 20°N and 40°N
(c) 40°N and 60°N (d) 20°S and 40°S

44. The time at any point on the earth's surface calculated when the sun reaches its highest position in the sky is known as
(a) Local time (b) Sidereal time
(c) Solar time (d) Standard time

45. What will be the time at a place situated at 70° W when it is 4 p.m. at a place situated at 35° E?
(a) 5 p.m. (b) 8 p.m.
(c) 11 a.m. (d) 9 a.m.

46. When the local time is 12.00 noon and the time at Greenwich Meridian is 8.00 a.m., the local longitude is
(a) 60° east (b) 60° west
(c) 45° west (d) 45° east

47. What is the name of area that lies between the Tropic of cancer and the Tropic of Capricorn?
(a) Torrid zone (b) Tropic zone
(c) Frigid zone (d) Tropic of temperate

48. In the troposphere, the normal lapse rate, i.e., the decrease in temperature with height is of the order of
(a) 1°C for 155 metres
(b) 1°C for 160 metres
(c) 1°C for 165 metres
(d) 1°C for 170 metres

49. A land-locked country in Africa is
(a) Zambia (b) Tanzania
(c) Nigeria (d) Somalia

50. In which one of the following positions does the Earth revolve at a faster rate around the Sun?
(a) Summer Solstice
(b) Winter Solstice
(c) Autumnal Equinox
(d) Vernal Equinox

51. If a magnetic needle is freely suspended at the geographic North Pole
(a) The needle will remain vertical with its N-pole downward
(b) The needle will remain almost vertical with its N-pole downward
(c) The needle will remain vertical with its S-pole downward
(d) The needle will remain almost vertical with its S-pole downward

52. South Pole is located in the continent of
(a) Africa (b) Australia
(c) Greenland (d) Antarctica

53. The atmospheric pressure at any place is measured by
(a) Altimeter
(b) Pressuremeter
(c) Barometer
(d) Thermometer

54. Which mountain system lies between the Black Sea and the Caspian Sea?
(a) Applachians (b) Caucasus
(c) Pyrenees (d) Atlas

55. Which of these cities once served as the capital of Japan?
(a) Kobe (b) Kyoto
(c) Okinawa (d) Sendia

56. Which peninsula lies between the Black Sea and the Sea of Azov?
(a) Crimean (b) Iberian
(c) Kamchatka (d) Yucatan

57. On the banks of which river is the city of London located?
(a) Severn (b) Thames
(c) Avon (d) Humber

58. Which among the following trees is considered the tallest in the world?
(a) Cedar (b) Redwood
(c) Eucalyptus (d) Date palm

59. Which country was earlier known as Siam?
(a) Indonesia (b) Somalia
(c) Thailand (d) Myanmar

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60. Which is the largest country in the Arabian Peninsula?
(a) Oman (b) Yemen
(c) Saudi Arabia (d) Kuwait

61. Which river forms the Grand Canyon in the United States?
(a) Mississippi (b) Hudson
(c) Colorado (d) Columbia

62. Which of these cloud forms is found at the highest altitudes?
(a) Billow (b) Nacreous
(c) Noctilucent (d) Pileus

63. Thickness of atmosphere around the earth is
(a) 100 km (b) 130 km
(c) 145 km (d) 195 km

64. Atmosphere around the earth maintains its
(a) Temperature (b) Pressure
(c) Density (d) Shape

65. The layers of atmosphere are divided into
(a) Two parts (b) Three parts
(c) Four parts (d) Five parts

66. Above the earth's surface, troposphere extends to a height of
(a) 08 km (b) 12 km
(c) 20 km (d) 15 km

67. Which next layer is above the troposphere
(a) Mesosphere (b) Stratasphere
(c) Thermosphere (d) Space

68. The mesosphere extended above the earth's surface is upto
(a) 60 km (b) 65 km
(c) 80 km (d) 85 km

69. Which one of the following phenomena occurs when water vapour condenses around a particle of smoke?
(a) Fog (b) Hail
(c) Mist (d) Smog

70. Lines joining places of the same earthquake intensity are known as
(a) Isohyets (b) Isohels
(c) Isoseismal lines (d) Isohalines

71. Canola refers to special type of oil seed mustard varieties bred for human consumption. The main characteristic of these varieties is that the
(a) Seeds have very high oil content
(b) Oil is rich in unsaturated fatty acids
(c) Oil has long shelf-life
(d) Oil has very low Erucic acid content

72. Which one of the following lakes forms an international boundary between Tanzania and Uganda?
(a) Chad (b) Malawi
(c) Victoria (d) Zambezi

73. Which of the following countries has highest percentage of land under cultivation?
(a) U.S.A. (b) India
(c) China (d) Canada

74. Which form of iron has got the highest carbon content?
(a) Mild Steel (b) Stainless Steel
(c) Wrought Iron (d) Cast Iron

75. Rows of trees grown along the coastal areas to reduce the impact of cyclones are known as
(a) Wind breaks (b) Protection
(c) Mangroves (d) Shelter belts

76. What kind of soil is treated with gypsum to make it suitable for cropping?
(a) Alkaline (b) Acidic
(c) Waterlogged
(d) Soil with excessive clay content

77. Which of the following is the smallest ocean of the world
(a) Pacific (b) Indian
(c) Atlantic (d) Arctic

78. Which one of the following is a metamorphic rock?
(a) Granite (b) Basalt
(c) Marble (d) Sandstone

79. According to Simon Winchester's book, how many Tictonic plates are there in the earth?
(a) 15 (b) 29
(c) 32 (d) 36

80. All the following are planetary winds *except*
(a) Trade winds (b) The westerlies
(c) Polar winds (d) The monsoon winds

81. Which one of the following parts of cold deserts and continents is correctly matched?
(a) Atacama ... South America
(b) Gobi ... Asia
(c) Kalahari ... Africa
(d) Great Sandy ... Australia

82. The production of rubber tree is better adopted to areas where the climate is
(a) Warm and humid
(b) Warm and dry
(c) Cool and moist
(d) Cool and dry

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83. Gulf streams are caused by
(a) Cyclones (b) Temperature
(c) Ocean Pressure
(d) Difference in water level

84. All vital atmospheric process leading to various climatic and weather conditions take place in the
(a) Troposphere (b) Ionosphere
(c) Exosphere (d) Stratosphere

85. The *minimum* land area recommended for forest cover to maintain proper ecological balance is
(a) 25% (b) 33%
(c) 43% (d) 53%

86. Which one of the following scholars suggested the earth's origin from gases and dust particles ?
(a) James Jeans (b) H. Alfven
(c) F. Hoyle (d) O. Schmidt

87. The theory that refers to an explosion about 10 to 15 billion years ago, which most astronomers believe to be the origin of the Universe, is called
(a) The Red Shift Theory
(b) Relativity Theory
(c) Big Bang Theory
(d) Titanic Theory

88. Black holes are contracted stars which
(a) Emit black body radiation
(b) Have weak gravitational field
(c) Have intense gravitational field.
(d) Have intense magnetic field.

89. Select the stranger in the group:
(a) Cartograms (b) Multiple bars
(c) Weather maps (d) Pie diagrams

90. The soil which cracks and shrinks most as it dries is
(a) Clayey soil (b) Porous soil
(c) Sandy soil (d) Loamy soil

91. East Timor, is now independent country, before independence it was part of
(a) Taiwan (b) Malaysia
(c) Thailand (d) Indonesia

92. Kosovo, is now independent country, before its independence it was part of which of the following countries?
(a) Yugoslavia (b) Albania
(c) Romania (d) Bulgaria

93. On the day of the summer solstice in the northern hemisphere, the length of day-time on the Antarctic Circle is
(a) 12 hours (b) 24 hours
(c) zero hour (d) 6 hours

94. Which of the following sequences represents correctly the different atmospheric layers from the earth's surface?
(a) Stratosphere, troposphere, tropopause, ionosphere
(b) Ionosphere, tropopause, troposphere, stratosphere
(c) Troposphere, tropopause, stratosphere, ionosphere
(d) Stratosphere, troposphere, ionosphere, tropopause

95. Days and nights are of equal duration on March 21 at
(a) The Tropic of Cancer alone
(b) The Tropic of Equator alone
(c) The Tropic of Capricorn alone
(d) All parallel of latitude

96. Which of the following is the most porous rock?
(a) Basalt (b) Granite
(c) Sandstone (d) Slate

97. Weathering is
(a) Breakdown or disintegration of rocks
(b) Formation of soil by fine sand particles
(c) Breaking of the surface of land by flowing water
(d) Wearing down of rock surface

98. Which type of plants are adapted to grow under drought conditions?
(a) Pteridophytes (b) Xerophytes
(c) Tropophytes (d) Hygrophytes

99. Which of the following is the oldest rock?
(a) Quartzite (b) Ordovician
(c) Carbonatities (d) Cumbrian

100. Which of the following pairs is correct?

	City	*River*
(a)	Baghdad	Tigris
(b)	Bonn	Danube
(c)	Rome	Seine
(d)	Paris	Tiber

101. The leading producer of silver is
(a) U.S.A. (b) Russia
(c) Mexico (d) South Africa

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102. The highest grade of coal whose surface is shining and has the highest calorific value, is
(a) Lignite (b) Peat
(c) Bituminous (d) Anthracite

103. If a place is located at 20° N, 80° E, in which of the following continents does it lie?
(a) Africa (b) Asia
(c) Europe (d) North America

104. Which one of the following is a Great Circle?
(a) The Arctic Circle
(b) The Tropic of Cancer
(c) The Equator
(d) The Tropic of Capricorn

105. Which of the following is the region of winter rainfall?
(a) Mediterranean (b) Tropical
(c) Arctic (d) Monsoon

106. Availability of ample water is one of the important consideration in the location of
(a) Cotton textile industry
(b) Paper industry
(c) Electronic industry
(d) Automobile industry

107. Soil formed by deposition of silt brought by rivers is
(a) Alluvial soil (b) Red soil
(c) Black soil (d) Podsols

108. Which of the following statements about ozone layer is correct?
(a) It converts UV radiations into electrical energy
(b) It protects the earth's life forms by preventing the damaging UV radiations from reaching earth's surface
(c) It is of uniform thickness
(d) None of the above

109. High tides at antipodes are caused due to
(a) Gravitational pull of the moon and the sun
(b) Gravitational pull of the sun
(c) Centrifugal, centripetal and gravitational pull of the sun
(d) Centrifugal, centripetal and gravitational pull of the sun and the moon

110. Which of the following types of rainfall is typical of equatorial regions?
(a) Convectional
(b) Orographic
(c) Cyclonic
(d) None of these

111. Change in season is caused due to
(a) Revolution of earth
(b) Rotation of earth
(c) Inclination of earth
(d) None of these

112. Winds generally blow from areas of
(a) Low pressure to that of high pressure
(b) High pressure to that of low pressure
(c) High pressure to that of moderate pressure
(d) Low pressure to that of moderate pressure

113. Which of the following soils is best suited for deep rooted crops?
(a) Red soil (b) Black soil
(c) Laterite soil (d) Alluvial soil

114. The imaginary line on the earth's surface which closely follows the 180° meridian, is called
(a) International Date Line
(b) Tropic of Cancer
(c) Equator
(d) Prime meridian

115. Which of the following countries has the largest area in the world?
(a) Canada (b) China
(c) U.S.A. (d) Russia

116. Which of the following climatic types is said to be characterised by Three Eighties : 80° F of temperature, 80 per cent of humidity and 80 inches of rainfall?
(a) Monsoon climate
(b) Equatorial climate
(c) Mediterranean climate
(d) Temperate climate

117. When it is 8 p.m. in Tokyo, what is the time at Panama Canal which is located at 180° W of it?
(a) 4.00 p.m. (b) 8.00 a.m.
(c) 12.00 a.m. (d) 12.00 noon

118. Evergreen forests are found
(a) In the estuaries of great rivers
(b) In the Himalayas above 3,000 ft. elevation
(c) Where the rainfall is between 30° to 40°
(d) Where the rainfall is between 80° and 120°

119. Which of the following forms kharif crops?
(a) Rice, wheat, bajra, jowar
(b) Rice, ragi, linseed, barley
(c) Wheat, gram, barley
(d) Jowar, cotton, rice, maize

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120. Hail storm occurs in summer season due to the formation of clouds called
(a) Cirrus (b) Cumulus
(c) Cumulonimbus (d) Cirrocumulus

121. The seasonal reversal of winds is a phenomenon noticed in
(a) Monsoon climate
(b) Mediterranean climate
(c) Equatorial climate
(d) High lands

122. 'Roaring Forties' are
(a) Cyclonic westerly winds in northern hemisphere
(b) Spring tides
(c) Ocean current in northern hemisphere
(d) Steady north west anti-trade in southern, hemisphere

123. Humidity in the air is maximum in
(a) Winter (b) Summer
(c) Monsoon (d) Autumn

124. Sandstones belong to
(a) Argilaceous rocks
(b) Calcareous rocks
(c) Carbonaceous rocks
(d) Arenaceous rocks

125. The lunar eclipse occurs when
(a) Moon is between the earth and the sun
(b) Earth is between the sun and the moon
(c) Sun is between the earth and the moon
(d) Earth is at right angles to the direction of the sun and the moon

126. The high yielding varieties of crops possess which of the following characters?
1. Ability to trap more solar energy
2. Ability to utilise more nutrients
3. High harvest index
4. Ability to use less water
(a) 1, 2 and 4 (b) 2 and 3
(c) 1, 2 and 3 (d) 1 and 3

127. Contour is a measure of
(a) Topography (b) Rainfall
(c) Temperature (d) Pressure

128. Latitude of south pole is
(a) 0° (b) 30°
(c) 60° (d) 90°

129. There is a severe difference in the climates of Northern and Southernn Hemispheres. Why?
(a) Due to rotation of earth around its axis
(b) Due to revolution of earth around the sun on its orbit
(c) Both of the above
(d) None of the above

130. The area associated with the greatest frequency of earthquakes is
(a) Eastern coastal areas of Asia
(b) Northern Coastal areas of Eurasia
(c) West coast of North and South Americas
(d) Western coastal areas of Africa

131. 'Cloud burst' means
(a) Formation of artificial rain
(b) Presence of scattered flakes of cloud in the sky
(c) Sowing of seeds of a crop in a cloudy weather
(d) Abnormally heavy downpour of rain, associated with a thunderstorm

132. Which one of the following is an ore of iron?
(a) Bauxite (b) Haematite
(c) Ilmentie (d) Gypsum

133. Which one of the following is correct?
(a) All longitudes are not great circles
(b) All longitudes and equator are great circles
(c) All latitudes and Greenwich meridian are great circles
(d) All latitudes and longitudes are great circles

134. The rocks which are formed by direct cooling and solidification of magma are called
(a) Sedmentary rocks
(b) Derivative rocks
(c) Igneous rocks
(d) Metamorphic rocks

135. Which one of the following is correct in respect of the Mediterranean type of climate?
(a) Warm winters
(b) Cold and dry summers
(c) Warm and dry summers and cold and wet winters
(d) Warm and wet summers and cold and dry winters

136. The shortest day is
(a) 25 December (b) 22 December
(c) 15 June (d) 22 June

137. Vasco da Gama discovered the sea route to India via the Cape of Good Hope in
(a) 1494 (b) 1498
(c) 1502 (d) 1506

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138. The earth revolves round the sun in its orbit by approx
(a) 5° per day (b) 2° per day
(c) 1° per day (d) 3° per day

139. One degree of longitude on the equator is equal to a distance of
(a) 96 km (b) 80 km
(c) 55 km (d) 112 km

140. Which of the following countries has longest land frontiers?
(a) Burma (b) Russia
(c) China (d) Laos

141. Which of the following is not a Scandinavian country?
(a) Denmark (b) Belgium
(c) Norway (d) None of these

142. The process by which water and wind wear down the rocks is called
(a) Erosion (b) Cosrision
(c) Derosion (d) None of them

143. The belt of low atmospheric pressure on either side of the equator are called
(a) Doldrums (b) Westerlies
(c) Latitudes (d) Easterlies

144. When the earth reaches its perihelion, then
(a) It is nearest to the sun
(b) It is farthest from the sun
(c) It is between the sun and moon
(d) None of the above

145. What is the duration of a day at the poles?
(a) 3 months (b) 6 months
(c) 9 months (d) 12 months

146. Biosphere is
(a) The core of the earth which is about 150 kms below earth
(b) The part of the earth's surface where human beings live
(c) The part of the earth's crust, water and atmosphere where plants and animals can subsist
(d) None of these

147. Coniferous forests are found in a region having
(a) Low mean annual temperature throughout the year and long cold winter
(b) Low rainfall and very low temperature throughout the year
(c) High humidity and high temperature throughout the year
(d) None of the above

148. Imaginary lines drawn on a global map, from pole to pole and perpendicular to the equator, are called
(a) Contours (b) Isobars
(c) Meridians (d) Steppes

149. Which of the following countries is known as the Land of Midnight Sun?
(a) Belgium (b) Holland
(c) Norway (d) Sweden

150. Asia accounts for nearly ...... percent of world population.
(a) 40% (b) 45%
(c) 60% (d) 70%

151. In which province of Pakistan Volcano mountains are located?
(a) Punjab (b) Sindh
(c) Balochistan (d) NWFP

152. Broadly, there are three layers of the earth – the crust, the mantle and the core. The crust forms what percentage of the total volume of the earth?
(a) 0.5 per cent (b) 2.5 per cent
(c) 10.5 per cent (d) 16.0 per cent

153. The land-mass of which of the following continents is the least?
(a) Africa (b) Asia
(c) Australia (d) Europe

154. A nautical mile is equal to
(a) 1,005 metres (b) 1,250 metres
(c) 1,575 metres (d) 1,852 metres

155. A violent whirlwind characterised by a black funnel-shaped cloud hanging from heavy cumulonimus is known by the name of
(a) Antipodes (b) Hurricane
(c) Tornado (d) Typhoon

156. Atmospheric temperature increases at the higher altitudes due to
(a) Conduction (b) Convection
(c) Inversion (d) Radiation

157. Which of the following crops needs maximum water per hectare?
(a) Barley (b) Maize
(c) Sugarcane (d) Wheat

158. The polar diameter of the earth is shorter than the equatorial diameter by
(a) 25 km (b) 60 km
(c) 43 km (d) 95 km

159. Earth completes one rotation on its axis in
(a) 23 hours and 30 minutes
(b) 23 hours 56 minutes and 4.9 seconds
(c) 24 hours

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(d) 24 hours 1 minute and 10 seconds

160. The Earth rotates on its axis from
(a) East to West (b) West to East
(c) North to South
(d) South to North

161. The latitude of the equator is
(a) 0° (b) 30°
(c) 45° (d) 60°

162. Asia is the biggest continent of the world. How much approximate of the world land is covered by area?
(a) 35% (b) 41%
(c) 29.5% (d) 38%

163. The percentage of oxygen in the atmospheric air is approximately?
(a) 10 per cent (b) 21 per cent
(c) 30 per cent (d) 40 per cent

164. The frozen Continent around the South Pole is
(a) Arctic (b) Antarctica
(c) Greenland (d) Iceland

165. Which of the following countries is not land-locked?
(a) Afghanistan (b) Burma
(c) Nepal (d) Switzerland

166. North America is the third largest continent of the world. How much world population in percentage is accommodated by North America?
(a) 6.5% (b) 8.5%
(c) 7.7% (d) 9.5%

167. Which of the following terms is not connected with the study of climate?
(a) Dew Point (b) Flash Point
(c) Hydrogram
(d) Stevenson Screen

168. Cirrus clouds are
(a) Low clouds
(b) Very low clouds
(c) High clouds
(d) Medium height clouds

169. "Climate is the average atmospheric conditions of an area over a considerable period of time. For proper conclusions observations are needed for a minimum period of
(a) 5 years (b) 10 years
(c) 20 years (d) 35 years

170. The soil which is an a mixture of sand, clay and silt is known as
(a) Loamay soil (b) Sandy soil
(c) Clayey soil (d) Desert soil

171. Which of the following heavy chemicals are produced from common salt?
(a) Chlorine only
(b) Caustic soda only
(c) Caustic soda and soda ash
(d) Chlorine, caustic soda and soda ash

172. Which of the following is not an example of exhaustible resources of the earth available to man?
(a) Coal (b) Natural gas
(c) Petroleum (d) Water

173. Which of the following is not an example of inexhaustible resources of the earth available to man?
(a) Air
(b) Fossil fuels
(c) Forests and wildlife
(d) Solar energy

174. Which one of the following four agricultural resources by way of crops cultivated by man does not belong to the group comprising the remaining three?
(a) Coffee (b) Fruits
(c) Sugarcane (d) Vegetables

175. Which is the least populated continent of the world?
(a) Antarctica (b) Australia
(c) North America (d) None of them

176. All of the following are renewable abiotic resources in nature except
(a) Cobalt (b) Copper and nickel
(c) Iron ore (d) Manganese

177. Which of the following is a non-metallic mineral?
(a) Cobalt (b) Gypsum
(c) Thorium (d) Uranium

178. All of the following are non-metallic minerals, except
(a) Asbestos (b) Graphite
(c) Platinum (d) Sulphur

179. The base of all of the following fuels is organic materials, except that of
(a) Coal (b) Natural gas
(c) Petroleum (d) Uranium

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180. Which of the following exhaustible and non-renewable fuels are inorganic in nature?
(a) Anthracite and bituminous coal
(b) Petroleum and natural gas
(c) Uranium and thorium
(d) Lignite and peat

181. Which of the following types of coal represents the first stage of formation of coal?
(a) Anthracite (b) Bituminous coal
(c) Lignite (d) Peat

182. Which of the following countries leads the world in the export of oil?
(a) Iran (b) Iraq
(c) Saudi Arabia (d) Venezuela

183. Copper may be found native, that is, in its pure state, but is more often found in chemical combinations with
(a) Iron, gold and silver
(b) Gold, silver and lead
(c) Iron, lead and sulphur
(d) All of the above minerals

184. The low heating capacity of which of the types of coal reduces its value as an industrial fuel?
(a) Anthracite
(b) Bituminous coal
(c) Lignite
(d) Peat

185. What percentage of the earth's total surface is covered by forests?
(a) 15 per cent (b) 20 per cent
(c) 24 per cent (d) 29 per cent

186. Which of the following types of forest mostly grow in the below of land lying between 50° N and 70° N?
(a) Temperate deciduous forests
(b) Tropical evergreen forests
(c) Temperate hardwood forests
(d) Temperate coniferous forests

187. The Panama Canal links
(a) Canada with Greenland
(b) North America with South America
(c) Siberia (Russia) with Greenland
(d) None of the above

188. Which of the following is concerned with the description and mapping of the main features of the Universe?
(a) Cosmography (b) Cosmology
(c) Geomorphology
(d) None of the above

189. Cryogenics is the science that
(a) Describes and maps the main features of the Universe
(b) Studies the nature of heavenly bodies
(c) Deals with the physical history of the earth
(d) Deals with the production, control and application of very low temperature

190. The speed per minute at which the earth revolves around the sun is
(a) 800 km (b) 1,000 km
(c) 1,400 km (d) More than 1,600 km

191. The North Pole of the Earth is turned away from the sun on
(a) 22nd September
(b) 22nd December
(c) 21st March (d) 21st June

192. When the sun shines vertically on the whole Arctic circle, it is vertical on the
(a) Tropic of cancer
(b) Equator
(c) Tropic of Capricorn
(d) None of the above

193. The area of our Globe that lies between the Tropic of Cancer and the Tropic of Caprico[illegible] is called
(a) Frigid zone
(b) North Temperate
(c) South Temperate
(d) Torrid zone

194. Which of the following illustrate the extreme effects of the phenomena of seasons?
(a) The Equatorial regions
(b) The Polar regions
(c) The North Temperate regions
(d) The South Temperate regions

195. The basin of which of the following rivers is regarded as having the highest hydel power potential?
(a) Amazon (b) Congo
(c) Mississippi (d) Nile

196. Which, amongst the following countries, has the highest density of population per sq km?
(a) Bangladesh (b) Burma
(c) Pakistan (d) Sri Lanka

197. Which of the following countries is in the continent of Europe?
(a) Albania (b) Algeria
(c) Libya (d) Venezuela

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198. Which of the following countries does not have a common land with the Peoples Republic of China?
(a) Japan (b) North Korea
(c) Russia
(d) All of the above have a common land border with China

199. Which is the smallest continent of the world area-wise?
(a) Antarctica (b) Asia
(c) Australia (d) Europe

200. Which of the following metals is not only magnetic but also radioactive?
(a) Aluminium (b) Iron
(c) Platinum (d) Thorium

201. Which layer of the atmosphere reflect radio-waves back to the earth's surface?
(a) Ionosphere (b) Ozone layer
(c) Stratosphere (d) Troposphere

202. What percentage of insolation is received by the earth's surface?
(a) 47% (b) 51%
(c) 66% (d) 100%

203. Which region of the earth's surface receives the highest amount of insolation?
(a) Land masses
(b) Water bodies
(c) Equatorial region
(d) Tropical desert

204. The term 'Flora' in the context of natural vegetation refers to
(a) Assemblage of plant species living in association with each other in a given environmental frame
(b) Plants of a particular region or period, listed by species and considered as a group
(c) A large tract covered by trees and shrubs and its administration for assessing economic benefits
(d) Role played by species of animals in the maintenance of ecological balance

205. Which of the following countries leads in the production of aluminium and its products in the world?
(a) Australia (b) France
(c) Pakistan (d) U.S.A.

206. Which of the following countries consumes more fish than any other country in the world?
(a) China (b) France
(c) Great Britain (d) Japan

207. Which country leads in the production of copper in the world?
(a) Chile (b) Australia
(c) U.S.A. (d) Russia

208. Which of the following types of coal contains over 90 per cent carbon and smokeless?
(a) Anthracite
(b) Bituminous coal
(c) Lignite
(d) Peat

209. The word "Tsunami" belongs to which of the following languages?
(a) English (b) Latin
(c) Chinese (d) Japanese

210. Where is the largest Coral Reef located?
(a) Germany (b) Australia
(c) U.K. (d) Canada

211. The sun's heat and light energy reaches the earth by which of the following modes of transmission?
(a) Conduction (b) Convection
(c) Radiation (d) Reflection

212. At the core of the earth, the temperature is estimated to be around
(a) 1,000 degree C (b) 1,200 degree C
(c) 2,000 degree C (d) 2,600 degree C

213. Which is meant by Archipelago?
(a) Cluster of Island
(b) Rocks Under Sea
(c) Cluster of Small States
(d) Cluster of Stars

214. The mean radius of the earth is approximately
(a) 3,200 km (b) 6,400 km
(c) 9,600 (d) 12,800 km

215. Of the total volume of the earth, the three layers – the crust, the mantle and the core, constitute respectively
(a) 16.5%, 0.5% and 83%
(b) 0.5%, 83% and 16.5%
(c) 83%, 16.5% and 0.5
(d) 0.5%, 16.5% and 83%

216. Which of the following layers of the earth is believed to have the heaviest mineral materials of highest density?
(a) Central Core
(b) Crust
(c) Mantle
(d) Both (b) and (c) above

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217. The heavier silicates named as 'Sima' or silica + magnesium are most abundant in the
(a) Crust (b) Core
(c) Mantle (d) Ocean floors

218. The principal reason for the formation of metamorphic rocks is
(a) Deposition of sediments
(b) Deposition of remains of plants and animals
(c) Extreme of heat and pressure
(d) Solidification of magma

219. Which of the following regions of the world is most thickly populated?
(a) East Asia
(b) South Asia
(c) North-West Europe
(d) North and South America

220. What is the average density of population in the world in 2011?
(a) 27 persons per sq. km
(b) 37 persons per sq. km
(c) 45 persons per sq. km
(d) 221 persons per sq. km

221. Which of the following factors is responsible for variation in the flora and fauna in different parts of the earth?
(a) Change in the physical environment
(b) Change in atmosphere
(c) Change in Biosphere
(d) Change in hydrosphere

222. Which of the following gases is most predominant in the Sun?
(a) Helium (b) Hydrogen
(c) Nitrogen (d) Ozone

223. What is the main cause of the movement in the earth's atmosphere?
(a) Difference in air pressure
(b) Solar energy
(c) Difference in temperature
(d) Wind

224. Name the world famous and finest harbour?
(a) New York (b) Sydney
(c) Mumbai (d) Calcutta

225. Which of the following statement is correct concerning Bridgetown?
(a) Chief port of Guinea-Bissau
(b) Capital of Barbados, an island country in Atlantic ocean
(c) A famous seaport of Barbados
(d) None of the above

226. Which of the following countries in South Asia are land-locked?
(a) Nepal and Bangladesh
(b) Bangladesh and Bhutan
(c) Bhutan and Nepal
(d) Bhutan and Pakistan

227. McMahon line is the border between
(a) India and China
(b) India and Nepal
(c) India and Pakistan
(d) India and Burma

228. Lines drawn parallel to the equator are called
(a) Latitudes (b) Longitudes
(c) Meridians (d) None of these

229. Lines joining places of equal temperature are called
(a) Isotherms (b) Isohytes
(c) Isomeres (d) Isobars

230. What is the diametre of Earth? (PMS 2006)
(a) 10556 Kilometre
(b) 12756 Kilometre
(c) 14756 Kilometre
(d) 16756 Kilometre

231. Choose the wrong definition
(a) Contour: Areas of equal height above sea level
(b) Isotherms: Area having the same temperature
(c) Isohytes: Equal rainfall areas
(d) Isobars: Equal atmospheric temperature areas

232. Wind blowing in a spiral form around a region of low atmospheric pressure is a
(a) Hurricane (b) Cyclone
(c) Anticyclone (d) Tornado

233. Spring tides occur
(a) Only on full Moon day
(b) Only on new Moon day
(c) The day when the Moon's position is in its first quarter
(d) Full moon day as well as on new Moon day

234. Spring tides occur at new Moon day and full moon day because on these days
(a) Moon and the Earth are at right angles
(b) Sun, Moon and the Earth are in line
(c) Sun and the Moon are opposite to each other
(d) Moon and the sun are nearer to the Earth

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235. When the days and nights are equal the rays of the sun directly fall on the
(a) Equator (b) Tropic of Cancer
(c) South Pole (d) North Pole

236. On June 21, the sun is vertically overhead the
(a) Tropic of Capricorn
(b) Equator
(c) Position of the sun is not definite
(d) Tropic of Cancer

237. Sun rises in the east and sets in the west due to the
(a) Shape of the Earth
(b) Revolution of the Earth around the Sun
(c) Rotation of the Earth on its axis
(d) Movement of the Sun

238. What are cyclones?
(a) Sudden, heavy floods
(b) No rain for a long duration
(c) Heavy showers
(d) Violent winds and rain

239. In a tropical cyclone, pressure
(a) Increases towards to center
(b) Decreases towards the center and wind moves in an anticlockwise direction in the northern hemisphere
(c) Does not vary appreciably
(d) First decreases towards the centre and then increases

240. The heaviest rainfall is recorded in
(a) Mediterranean regions
(b) Temperate regions
(c) Equatorial regions
(d) Tropical mountain areas *NDA*

241. The Mediterranean regions are characterized by heavy rain in
(a) Winter (b) Summer
(c) Spring (d) Autumn

242. Winds which blow constantly throughout the year in a particular direction from high pressure to low pressure belts of the world are known as
(a) Planetary winds (b) Trade winds
(c) Westerlies (d) Polar winds

243. Which of the following is an igneous rock?
(a) Shale (b) Quartzite
(c) Marble (d) Granite

244. Which of the following is an example of sedimentary rock?
(a) Marble (b) Slate
(c) Limestone (d) None of these

245. To which kind of rock does marble belong?
(a) Metamorphic (b) Sedimentary
(c) Plutonic (d) Volcanic

246. Which of the following types of forests account for most of the total forest area in the world?
(a) Deciduous (b) Littoral
(c) Broad-leaved (d) Conferous

247. In which type of climate are coniferous forests found?
(a) Savanna (b) Mediterranean
(c) Siberian (d) Hot desert

248. Which of the following is the icy continent?
(a) Greenland (b) Antarctica
(c) Australia (d) None of these

249. The length of the Suez canal is approximately
(a) 110 km (b) 150 km
(c) 160 km (d) 125 km

250. Which of the following is an example of seasonal winds?
(a) Thunderstorms (b) Monsoon
(c) Cyclones (d) Anticyclones

251. Which types of rocks are mainly found in the Himalayan ranges?
(a) Sedimentary (b) Metamorphic
(c) Igneous (d) Granite

252. The Third world comprises approximately ______ % of world's human race?
(a) 50 (b) 70
(c) 45 (d) 30

253. The inclination of the earth's axis to the orbital plane is:
(a) $21\frac{1°}{2}$ (b) $23\frac{1°}{2}$
(c) $66\frac{1°}{2}$ (d) 90°

254. "Mohs' Scale" is used to indicate the:
(a) Degree of brittleness of a substance
(b) Degree of hardness of minerals.
(c) Degree of viscosity of a liquid
(d) Degree of elasticity of a material

255. What can be the maximum duration of totality for a solar eclipse?
(a) 12.5 minutes
(b) 7 minutes 40 seconds
(c) 1 hour 40 seconds
(d) There is no maximum duration

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256. The total surface area of earth is:
(a) 510 million sq km
(b) 610 million sq km
(c) 710 million sq km
(d) 810 million sq km

257. What is the approximate equatorial circumference of the earth?
(a) 30,000 Km
(b) 35,000 Km
(c) 40,000 Km
(d) 45,000 Km

258. The Earth rotates around an axis pointing towards:
(a) The moon (b) The pole star
(c) The sun (d) Venus

259. Latitude of place is indicative of its:
(a) Time
(b) Altitude
(c) Amount of rainfall
(d) Temperature

260. The upper part of the mantle upon which the crust of the Earth floats is called:
(a) Barysphere
(b) Mesophere
(c) Mohorovic discontinuity
(d) Asthenosphere

261. Which one of the following is present in the largest amount in terms of percent by mass in the earth's crust?
(a) Silicon (b) Oxygen
(c) Carbon (d) Calcium

262. The difference in the duration of day and night increases as one moves from:
(a) West to east
(b) East and west of the prime meridian
(c) Poles to equator
(d) Equator to poles

263. The sun reaches its maximum angular distance from the equator at the:
(a) Zenith (b) Solstice
(c) Equinox (d) Noontime

264. Latitude and Longitude both:
(a) Pass through poles
(b) Run parallel to the equator
(c) Run parallel to each other
(d) Run perpendicular to each other

265. The distance of the equator from either of the poles is:
(a) 500 km (b) 5001 km
(c) 10,002 km (d) 36,005 km

266. Which of the following is a rift valley?
(a) The Amazon Valley
(b) The Thames Valley
(c) The Rhine Valley
(d) None of these

267. Japan is called 'land of the rising sun' because:
(a) Sun rises there as soon as it sets
(b) Sun always remains in the eastern part of the sky throughout the day in Japan
(c) Japan being the Easternmost country in the World, it has the earliest sunrise
(d) The rays of the sun get reflected from the waters of the sea and make the sunrise beautiful in Japan

268. The distance between the earth and the sun is smallest in the month of:
(a) January (b) March
(c) June (d) September

269. Why are winters more severe in Southern Hemisphere than in the Northern Hemisphere?
(a) Earth is tilted towards the Sun in the northern Hemisphere
(b) Northern Hemisphere receives more sunlight
(c) Because of more iceberg activity in Southern Hemisphere
(d) Southern Hemisphere is less inhabited

270. If a traveller going from Vancouver to Tokyo crosses the International Date Line on Saturday, what will be the day for him at Tokyo?
(a) Friday (b) Saturday
(c) Sunday (d) Monday

271. Name the types of forest which accounts for the most of the total forest area in the world
(a) Deciduous forests
(b) Littoral forests
(c) Coniferous forests
(d) Broad-leaved forests

272. Panama Canal is under the control of ________
(a) Cuba
(b) Panama
(c) United States of America
(d) United Kingdom

273. In how many time zones has the world been divided?
(a) 15
(b) 24
(c) 90
(d) 180

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274. Through which one of the following countries the Tropic of Cancer does not pass through?
(a) Bangladesh (b) China
(c) Myanmar (d) Nepal

275. All the watches of a country are set according to:
(a) Local time
(b) Standard time of the country
(c) Greenwich mean time
(d) Time of sunrise and sunset

276. Winds blow:
(a) In regions of low pressure
(b) From a region of high pressure to a region of low pressure
(c) From a region of low pressure to a region of high pressure
(d) In regions of high pressure

277. Speleology is the scientific study of
(a) Soil (b) Caves
(c) Clouds (d) Rain

278. Atmospheric pressure exerted on earth is due to:
(a) Gravitational pull of the earth
(b) Rotation of earth
(c) Revolution of earth
(d) Uneven heating of earth

279. The Sea breeze blows during:
(a) Day from land to sea
(b) Day from sea to land
(c) Night from land to sea
(d) Right from sea to land

280. The Trade winds are caused by:
(a) Rotation of the earth
(b) Revolution of the earth
(c) Inflaming movement of air along the earth's surface towards the equator
(d) None of these

281. Temperature generally decreases towards the poles because:
(a) Air movement is generally towards the equator
(b) Cold polar air masses prevent surface heating of the land
(c) Cold surfaces do not absorb solar energy as readily as warm surfaces
(d) Progressively lesser solar energy per unit area falls on the earth's surface as we move to polar regions

282. The plane of contact of the troposphere and stratosphere is known as:
(a) Mesosphere (b) Ionosphere
(c) Stratopause (d) Tropopause

283. What causes snowfall?
(a) When condensation takes place below 0°C and precipitation occurs in the form of flakes
(b) When rain freezes into snow flakes while passing through the atmosphere
(c) When condensation takes place in form of fog and precipitation occurs as flakes
(d) When the air temperature is much lower than surface temperature

284. What is the correct sequence of the given clouds from low to high altitudes?
(a) Stratus, Cumulonimbus, Cirrostratus, Cirrus
(b) Stratus, Cirrostratus, Cumulonibus, Cirrus
(c) Cumulonimbus, Stratus, Cirrus, Cirrostratus
(d) Cumulonimbus, Stratus, Cirrostratus, Cirrus

285. The portion of the atmosphere which extends from the earth's surface upto 15 km and experiences decrease in temperature at constant rate is:
(a) Stratosphere (b) Tropopause
(c) Troposphere (d) Ionosphere

286. Atmospheric pressure depends on:
1. Altitude 2. Temperature
3. Earth rotation 4. Moon's pull
(a) 1, 2 and 3 (b) 2 and 3
(c) 1 and 2 (d) 1 2, 3 and 4

287. Which one of the following is not a form of precipitation?
(a) Fog (b) Hail
(c) Snowfall (d) Rainfall

288. Perspiration is maximum when temperature is:
(a) Low and air is dry
(b) Low and air is humid
(c) High and air is dry
(d) High and air is humid

289. In which type of rocks are coal and petroleum found?
(a) Granite (b) Igneous
(c) Metamorphic (d) Sedimentary

290. The removal of rock, layer by layer due to weathering is called:
(a) Block disintegration
(b) Dellation
(c) Exfoliation
(d) Granular disintegration

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291. Arrange the following soil particle by size in the descending order:

I. Gravel
II. Clay
III. Silt
IV. Sand

(a) I, II, III, IV
(b) IV, II, III, I
(c) I, IV, III, II
(d) III, IV, I, II

292. Japan experiences frequent earthquakes because it is located:

(a) On the eastern cost of Asia
(b) On the meeting point of two plates of the earth's crust
(c) Amidst the ocean
(d) In the volcanic belt

293. The movement inside the Earth's crust is studied by:

(a) Geodesy
(b) Geology
(c) Plate Tectonics
(d) Seismology

294. Which of the following are correctly matched?

1. Gneiss : Metamorphic
2. Granite : Igneous
3. Sandstone : Sedimentary

(a) 1 only
(b) 1 and 2
(c) 2 and 3
(d) 1, 2 and 3

295. Sedimentary rocks are formed by the process of:

(a) Metamorphism
(b) Weathering
(c) Deposition
(d) Both (b) and (c)

296. Choose the correct statement about Sedimentary rocks:

(a) These rocks cannot be formed under water
(b) These rocks are crystalline
(c) The structure of these rocks is contingent on heat and pressure
(d) These rocks have been deposited in layers

297. This igneous rocks are formed due to:

(a) Accumulation of sedments at the bottom of sea
(b) Granitisation
(c) Disintegration of magma
(d) Altering of metamorphic rocks

298. Which of the following is not a sedimentary rock?

(a) Limestone
(b) Marble
(c) Sandstone
(d) Shale

299. Which of the following rocks is transformed into marble?

(a) Granite
(b) Limestone
(c) Peat
(d) Shale

300. The principal reason for the formation of metamorphic rocks is:

(a) Decomposition of sediments
(b) Deposition of remains of plants and animals
(c) Extreme heat and pressure
(d) Solidification of magma

301. In which type of rocks are metals like gold and copper mostly found?

(a) Old Sedimentary
(b) Old Igneous
(c) Old Metamorphic
(d) New Metamorphic

302. The type of igneous rocks which are formed midway between volcanic and plutonic rocks, are known as:

(a) Basalt
(b) Hypabyssal
(c) Laccolith
(d) Batholith

303. Rocks which are formed by the solidification of lava on the earth's surface are:

(a) Sandstone
(b) Limestone
(c) Granites
(d) Basalts

304. Which form of coal is mainly suitable for producing thermal power?

(a) Anthracite
(b) Bituminous
(c) Lignite
(d) Peat

305. Which of the following types of coal represents the first stage of formation of coal?

(a) Anthracite
(b) Lignite
(c) Peat
(d) Bituminous

306. Which one of the following is a organically formed sedimentary rock?

(a) Breccia
(b) Gypsum
(c) Mudstone
(d) Limestone

307. The largest reserves of fresh water on the Earth's surface is in:

(a) North America
(b) South America
(c) Russia
(d) Africa

308. Which one of the following countries does not border the Caspian sea?

(a) Armenia
(b) Azerbaijan
(c) Kazakhastan
(d) Turkmenistan

309. Which of the following is called the "Gateway to the Pacific"?

(a) Suez Canal
(b) Panama Canal
(c) Bering Sea
(d) Gulf of Alaska

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310. Coral reefs are formed by:
(a) Volcanic rocks
(b) Marine sediments
(c) Chlorine material precipitated from sea water
(d) Tiny colonial marine animals which construct limestone skeleton material

311. The direction of ocean currents is reversed with season:
(a) In the Pacific Ocean
(b) In the Atlantic Ocean
(c) In the Indian Ocean
(d) In the Mediterranean Sea

312. Which one of the following seas is without a coastline?
(a) White sea
(b) Sargasso sea
(c) Sea of Okhotsk
(d) Tasman sea

313. Which of the following cities is incorrectly matched to the river on which it is situated?
(a) Budapest-River Danube
(b) Baghdad-River Tigris
(c) Amsterdam-River Amsel
(d) Alexandria-River Niger

314. Biggest Hail storm was recorded in 2003 in
(a) India (b) USA
(c) UK (d) Sudan

315. Which types of forest are found in the areas where the rainfall is between 80 degree to 120 degrees?
(a) Coniferous forest
(b) Seasonal forests
(c) Evergreen forests
(d) Litterol forest

316. South Africa is the largest exporter of
(a) Silver (b) Teak wood
(c) Tin (d) Lead

317. Which is the main industrial activity of Tanzania?
(a) Cloves export
(b) Mining
(c) Oil based
(d) Sugar/coconut based

318. Which country is the biggest producer of mercury in the world?
(a) Mexico (b) Canada
(c) Italy (d) Germany

319. With which of the following items is Kimberley associated?
(a) Diamonds (b) Silver
(c) Perfumes (d) Cereals

320. In which country are diamonds abundantly found?
(a) Canada (b) Russia
(c) South Africa (d) Australia

321. Which of the following pairs are wrong?
(a) Iron: Russia (b) Mica: Japan
(c) Coal: USA (d) Aluminium: USA

322. Seasonal contrast in temperature are minimum in the equatorial region because:
(a) Sky is always overcast
(b) Sun is almost vertically overhead throughout the year
(c) Forests prevent sunlight from reaching the ground
(d) Rainfall cool the atmosphere

323. Which one of the following ecosystems covers the largest area of the earth's surface?
(a) Desert Ecosystem
(b) Grassland Ecosystem
(c) Mountain Ecosystem
(d) Marine Ecosystem

324. What happens to tropical soils when the rain forest is cleared?
(a) The soil improves to the extent that soluble nutrients are no longer depleted by the trees
(b) There is little effect on the soil because of its depth of richness
(c) Clearing interrupts the critical nutrient cycle and leads to soil leaching
(d) The soils stabilise and become excellent for grain

325. The factors which determine the climate of a place are:
1. Soil 2. Latitude
3. Altitude 4. Vegetation
(a) 2 only (b) 1 and 2 only
(c) 2 and 3 only (d) 3 and 4 only

326. Deciduous trees are those:
(a) That grow up straight
(b) That grow plenty in dry places
(c) That never bear fruits
(d) That shed their leaves during a certain season

327. Black Forest is the name of mountain present in
(a) Canada (b) USA
(c) Russia (d) Germany

328. Which of the following regions gets no rainfall throughout the year?
(a) The Equatorial Region

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(b) The Tundra Region
(c) The Himalayan Region
(d) The Mediterranean Region

329. Where was the world's first oil-well drilled 1859?
(a) Baku in Russia
(b) Titusfills in Pennsylvania, U.S.A.
(c) Digboi is Assam, India
(d) Dhahran in Saudi Arabia

330. Venice in Italy and Vienna in Austria are famous for
(a) Pottery
(b) Glass industry
(c) Chemical industry
(d) Textile industry

331. Match the following:

A.	Sheffield	1.	Germany
B.	Detroit	2.	England
C.	Baku	3.	France
D.	Munich	4.	Azerbaijan
		5.	U.S.A.

	A	B	C	D
(a)	2	5	4	1
(b)	2	4	5	3
(c)	3	5	4	1
(d)	5	1	4	2

332. Which types of forests are found in area where low mean annual temperature throughout the year and long cold winter?
(a) Coniferous forest
(b) Broad leaved forests
(c) Dedous forest
(d) Littoral forests

333. Which crop is affected by the disease called blast?
(a) Rice (b) Wheat
(c) Sugarcane (d) Bajra

334. Which of the following practices of cultivation can be referred to as crop rotation?
(a) Different crops in different seasons
(b) Different crops in the same season
(c) The same crop in different seasons
(d) The same crop in different fields

335. Match List I with List II and select the correct answer by using the codes given below the Lists:

List I (Crops)	List II (Geographical conditions)
(a) Barley	1. Hot and dry climate with poor soil
(b) Rice	2. Cool climate with poor soil
(c) Millets	3. Warm and moist climate with high altitude
(d) Tea	4. Hot and moist climate with rich soil

Codes:

	(a)	(b)	(c)	(d)
A.	2	4	1	3
B.	3	4	1	2
C.	2	1	4	3
D.	3	2	4	1

336. Which one of the following fertilizers contains a high percentage of nitrogen?
(a) Urea
(b) Ammonium nitrate
(c) Ammonium sulphate
(d) Calcium nitrate

337. 'Flash Point" term is related with the
(a) Study of water (b) Study of climate
(c) Study of Dew drops
(d) Study of rocks

338. Which country tops in the production of coconut in the world?
(a) Bangladesh (b) Sri Lanka
(c) Philippines (d) Indonesia

339. Jute requires hot, moist climate with adequate amount of rain and rich soil. Which country in the world is leading in jute production?
(a) Brazil (b) India
(c) Thailand (d) Bangladesh

340. Cocoa is a tropical plant and requires heat and moisture. Which of the following countries is leading in cocoa production in the world?
(a) Brazil (b) Nigeria
(c) Ghana (d) Ivory Coast

341. Coffee requires hot and moist climate and grows best on slopes. Which of the following countries is leading in coffee production?
(a) Indonesia (b) India
(c) Brazil (d) Columbia

342. More or less like coffee, tea requires warm, moist, tropical climate and grows well on hill

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slopes. Which of the following countries is leading in tea production?
(a) India (b) China
(c) Sri Lanka (d) Indonesia

343. For which crop, black volcanic soil and tropical climate is most suitable without excess rainfall?
(a) Bajra (b) Tobacco
(c) Cotton (d) Jute

344. Higher summer temperature, stiff soil capable of supporting heavy weight of plant are essential for
(a) Rubber (b) Jute
(c) Rice (d) Maize

345. Which is the largest cotton producing country in the world?
(a) India (b) Egypt
(c) China (d) USA

346. Wheat being a plant of temperate zone, grows well on plains away from sea and having moderately dry climate. World's maximum production of wheat is obtained from
(a) Australia (b) China
(c) Canada (d) Russia

347. Which country leads in production of barley among the following
(a) China (b) India
(c) USA (d) Canada

348. Groundnut crop is the monopoly of
(a) Indonesia (b) Bangladesh
(c) Pakistan (d) India

349. Which of the following countries is known as Island of Cloves?
(a) Zanzibar (b) Indonesia
(c) Kenya (d) Bahmas

350. Which country has extensive mechanized agriculture and which is the main crop produced in that country?
(a) Australia – Wheat
(b) Soviet Union – Maize
(c) USA – Wheat
(d) North America – Wheat

351. Which continent leads in contribution to world's rice production to the maximum and how much?
(a) Australia (50%) (b) Africa (42%)
(c) Asia (90%) (d) Asia (72%)

352. Tobacco, a product of high commercial value these days and which grows under a wide range of climates, is a major plantation of
(a) Indian (b) China
(c) USA (d) Pakistan

353. Which two of the following products have great commercial value in Tropical Monosoon Region?
(a) Wheat and Maize (b) Wheat and Rice
(c) Rice and Tea (d) Tea and Wheat

354. For which agricultural produce, Sudan is famous and which comes under Tropical Grassland (Savanas) Region?
(a) Coffee (b) Millets
(c) Barley (d) Cotton

355. Myanmar, whose chief mineral resources comprise silver, lead, and tin, is engaged in chief industrial activity of
(a) Tinning black iron for food containers
(b) Tinning export (c) Rice export
(d) None of these

356. Besides tobacco, tea and cotton, which is the other agricultural produce of China?
(a) Maize (b) Rice
(c) Soyabean (d) Millets

357. Which is the most important crop of the Nile delta?
(a) Sugarcane (b) Maize
(c) Cotton (d) Millets

358. Which of the following countries is the largest supplier of meat?
(a) Argentina (b) Pakistan
(c) Iran (d) Arabia

359. Which of the following is an agricultural produce of Taiwan?
(a) Coffee (b) Maize
(c) Rice (d) Millets

360. Of all the animal pests that attack crop plants, the most common and which cause the maximum damage are
(a) Birds (b) Insects
(c) Mice (d) Rats

361. Which of the following crops is regarded as 'Cash Crop'?
(a) Cotton (b) Jute
(c) Tea (d) All of the above

362. Which one of the following is not a 'Cash Crop'?
(a) Cotton (b) Groundnut
(c) Sugarcane (d) Wheat

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363. Which gas present in the Earth's atmosphere can absorb solar ultraviolet radiation?
(a) Oxygen (b) Ozone
(c) Carbon dioxide (d) Nitrogen

364. Among the world's largest cotton growing countries. Pakistan stands at number
(a) Three (b) Four
(c) Six (d) Nine

365. A famous natural bridge is located in
(a) Virginia (b) Vermont
(c) Maine (d) Washington

366. The most severe storm is a
(a) Hurricane (b) Tornado
(c) Typhone (d) None of these

367. Galapagos Islands are situated in
(a) Atlantic ocean (b) Indian ocean
(c) Southern ocean (d) Pacific ocean

368. Eskimos are the primitive people living in
(a) Western Europe (b) North America
(c) North Asia (d) Centrla Africa

369. Which type of clouds are called, rained clouds
(a) Cumulus (b) Nimbostratus
(c) Cirrus (d) None of these

370. A light year
(a) 8.46 trillion kilometers
(b) 9.46 trillion kilometers
(c) 10.46 trillion kilometers
(d) None of these

371. Atmospheric pressure at sea level is
(a) 750 mm (b) 760 mm
(c) 770 mm (d) None of these

372. The number of Central Asian Republics (CARs) is
(a) Five (b) Four
(c) Ten (d) Eight

373. Great beight is located in the
(a) Europe (b) Austrila
(c) Asia (d) Africa

374. Truck farming is a
(a) Inaland fishing (b) Lumbering
(c) Truck manufacturing at
(d) Vegetable growing

375. Dogger Bank in Pacific Ocean is famous for
(a) Fishing ground (b) Forest
(c) Coast (d) Tourism

376. Ruhr coal field is situated in
(a) Brazil (b) Germany
(c) Indonesia (d) South Africa

377. India is the world's largest producer of
(a) Iron ore (b) Coal
(c) Mica (d) Coppeer

378. The concept of heartland was given by
(a) Hanshofer (b) Mackinder
(c) Ratzel (d) None of these

379. The first irrigated forest in Pakistan changa manga was established in
(a) 1866 (b) 1890
(c) 1892 (d) 1896

380. Lakhra coal field is located
(a) North of hyderabad
(b) South of hyderabad
(c) East of hyderabad
(d) West of hyderabad

381. Korea Bay lies in
(a) Sea in Japan (b) East China Sea
(c) Bering sea (d) Yellow sea

382. Height of Lahore from sea level
(a) 500 feet (b) 600 feet
(c) 480 feet (d) 702 feet

383. Height of Islamabad from sea level
(a) 1800 feet (b) 2000 feet
(c) 2200 feet (d) 3000 feet

384. When was demarcated Pakistan-Iran border line
(a) 24th September, 1872
(b) 24th September, 1874
(c) 24th September, 1876
(d) 24th September, 1878

385 Oasis is associated with _____
(a) Glacier (b) Desert
(c) Island (d) Volcanoes

386. A local wind blow from sea to land is
(a) Land breeze (b) Sea Breeze
(c) Sirocco (d) North breeze

387. What is Sericulture?
(a) Cultivation of fruit
(b) Rearing of silk worm
(c) Cultivation of trees
(d) Cultivation of vegetables

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ANSWERS

1	b	2	a	3	b	4	c	5	d	6	b	7	c	8	c	9	d	10	d
11	a	12	a	13	a	14	b	15	a	16	a	17	b	18	b	19	b	20	c
21	c	22	d	23	a	24	a	25	b	26	d	27	c	28	c	29	d	30	b
31	c	32	c	33	a	34	b	35	b	36	d	37	b	38	d	39	a	40	d
41	d	42	c	43	b	44	a	45	d	46	a	47	d	48	c	49	a	50	d
51	c	52	d	53	c	54	b	55	b	56	a	57	b	58	b	59	c	60	c
61	c	62	c	63	c	64	a	65	c	66	d	67	b	68	d	69	d	70	c
71	b	72	c	73	b	74	d	75	c	76	a	77	d	78	c	79	d	80	d
81	b	82	a	83	c	84	a	85	a	86	d	87	c	88	c	89	c	90	a
91	d	92	a	93	c	94	c	95	d	96	c	97	a	98	b	99	b	100	a
101	a	102	b	103	b	104	a	105	d	106	b	107	b	108	d	109	d	110	c
111	a	112	b	113	b	114	a	115	d	116	b	117	b	118	d	119	d	120	c
121	a	122	d	123	c	124	d	125	b	126	c	127	a	128	d	129	b	130	c
131	d	132	b	133	b	134	c	135	c	136	b	137	b	138	c	139	d	140	c
141	b	142	a	143	a	144	a	145	b	146	b	147	a	148	c	149	c	150	c
151	b	152	a	153	c	154	d	155	c	156	b	157	c	158	c	159	b	160	b
161	a	162	c	163	b	164	b	165	b	166	c	167	b	168	c	169	d	170	a
171	d	172	d	173	b	174	a	175	a	176	c	177	b	178	c	179	d	180	c
181	d	182	c	183	d	184	d	185	a	186	d	187	b	188	a	189	d	190	d
191	b	192	a	193	d	194	b	195	b	196	a	197	a	198	a	199	c	200	d
201	a	202	b	203	c	204	b	205	d	206	a	207	a	208	a	209	d	210	b
211	c	212	c	213	a	214	b	215	d	216	a	217	d	218	c	219	b	220	c
221	c	222	b	223	b	224	b	225	b	226	c	227	a	228	a	229	a	230	b
231	a	232	b	233	d	234	b	235	a	236	d	237	c	238	d	239	b	240	c
241	d	242	a	243	d	244	c	245	a	246	c	247	c	248	b	249	c	250	b
251	a	252	b	253	b	254	b	255	b	256	a	257	c	258	b	259	d	260	d
261	b	262	d	263	b	264	d	265	c	266	c	267	c	268	a	269	c	270	c
271	c	272	b	273	b	274	d	275	b	276	b	277	b	278	a	279	b	280	c
281	d	282	d	283	a	284	d	285	c	286	c	287	a	288	c	289	d	290	c
291	c	292	b	293	d	294	d	295	d	296	d	297	b	298	b	299	b	300	c
301	b	302	b	303	d	304	b	305	c	306	d	307	a	308	a	309	b	310	d
311	c	312	b	313	d	314	c	315	a	316	c	317	b	318	c	319	a	320	c
321	b	322	b	323	d	324	c	325	c	326	d	327	d	328	b	329	b	330	b
331	a	332	b	333	a	334	a	335	a	336	a	337	a	338	d	339	b	340	d
341	c	342	a	343	c	344	c	345	c	346	b	347	d	348	d	349	a	350	c
351	c	352	b	353	c	354	d	355	c	356	b	357	c	358	a	359	a	360	b
361	d	362	d	363	b	364	b	365	a	366	b	367	d	368	b	369	b	370	b
371	b	372	a	373	c	374	d	375	a	376	b	377	c	378	b	379	a	380	a
381	d	382	d	383	b	384	a	385	b	386	b	387	b						

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PHYSICS

1. What are primary colours?
(a) Colour of the rainbow
(b) Colour in the spectrum of white light
(c) Colours which cannot be produced
(d) Colour found in nature

2. Air bubble in water shines because of the phenomenon of
(a) Dispersion (b) Refraction
(c) Diffraction
(d) Total internal reflection

3. Sun and the other stars are virtually huge nuclear explosion chambers producing a large amount of heat and light. Yet, we do not hear any of the explosions because
(a) Heat and light are electromagnetic radiations and travel much faster than sound
(b) Sound waves get attenuated completely before they reach the earth
(c) The process involved in the interior of the sun and the stars relate to atomic and subatomic particles and not molecules and their vibrations
(d) The outer space is an absolute vacuum

4. The advantage of AC over DC is that
(a) It contains more electrical energy
(b) It is free from voltage fluctuations
(c) Its generation costs much less
(d) It can be transmitted over long distances with minimum power loss

5. What is minimum escape velocity—the speed necessary to counter earth's gravity and to break away from earth into outer space—required for a rocket to be launched into space?
(a) 5 km per second (b) 6 km per second
(c) 11 km per second (d) 20 km per second

6. Which of the following devices is used to step up or step down the voltage of alternating current?
(a) Induction coil (b) Transformer
(c) Tansistor (d) Rectifier

7. The spherical shape of a small drop of rain is due to
(a) Viscosity (b) Surface tension
(c) Atmospheric pressure
(d) Gravity

8. The blue colour of the sky can be attributed to
(a) Differential scattering of sunlight by the atmosphere
(b) Total internal reflection of the sunlight by the atmosphere
(c) Absorption of sunlight
(d) Refraction of sunlight by the atmosphere

9. Which one of the following sets of properties are relevant for an electrical fuse wire needed for normal application?
(a) Thick wire, high melting point alloy, short length
(b) Thick wire, low melting point alloy, large length
(c) Short length, low melting point alloy, thin wire
(d) Large length, low melting point alloy, thin wire

10. Ice floats on water because the density of ice is less than that of water, Out of the following what part of giant icebergs remains above water?
(a) 1/10 (b) 1/4
(c) 1/2 (d) 3/4

11. Which one of the following colours has the longest wavelength?
(a) Green (b) Yellow
(c) Blue (d) Red

12. Which one of the following can be used to focus sunlight?
(a) Plane mirror (b) Concave lens
(c) Concave mirror (d) Convex mirror

13. Which of the following is a good conductor of electricity?
(a) PVC (b) Glass
(c) Rubber (d) Graphite

14. The tendency of a liquid drop to contract and occupy minimum area is due to
(a) Surface tension (b) Viscosity
(c) Density (d) Vapour pressure

15. Choke coil is a coil of
(a) High resistance and high inductance
(b) Low resistance and high inductance
(c) High resistance and low inductance
(d) Low resistance and low inductance

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16. Conductors, insulators and semi-conductors differ from each other due to property of
(a) ability of the current they carry
(b) formation of crystal lattice
(c) binding energy of their electrons
(d) mutual width of their energy gaps

17. On which principle does the tape-recorder function?
(a) Electromagnetic Induction
(b) Electrovalency
(c) Gay Lussac's law of combining volumes
(d) Boyle's Law

18. When a constant force is applied to a body it moves with uniform
(a) Momentum (b) Velocity
(c) Speed (d) Acceleration

19. The silvered surface of thermos flask prevents transfer of heat by
(a) Conduction (b) Convection
(c) Reflection (d) Radiation

20. When wind blows at high velocity, roof tops are blown off because pressure
(a) Outside is more than inside the roof
(b) Inside is more than outside the roof
(c) Increase due to wind velocity
(d) Is exerted by air from outside

21. Tube light works on the principle of
(a) Chemical effect of current
(b) Heating effect of current
(c) Magnetic effect of current
(d) Discharge of electricity through gases

22. In a refrigerator, cooling is produced by
(a) The ice which deposits on the freezer
(b) The evaporation of a volatile liquid
(c) The sudden expansion of a compressed gas
(d) None of the above

23. Air is completely removed from an electric bulb to prevent
(a) Oxidation of tungsten filament
(b) Bursting of the bulb
(c) Loss of light due to absorption
(d) None of the above

24. A person climbing a hill bends forward in order to
(a) Avoid slipping (b) Increase speed
(c) Reduce fatigue (d) Increase stability

25. On earth a moving body ordinarily comes to rest by itself because of the
(a) Law of inertia
(b) Forces of friction
(c) Conservation of momentum
(d) Gravity

26. When the door of an operating refrigerator is opened the temperature of the room will
(a) Decrease
(b) Remain unchanged
(c) Fall down immediately
(d) Increase

27. An electric motor is used to convert
(a) Electrical energy into mechanical energy
(b) Mechanical energy into kinetic energy
(c) Mechanical energy into electrical energy
(d) Higher voltage to lower voltage

28. Two parallel wires carrying currents in the same direction attract each other because of
(a) Potential difference between them
(b) Mutual inductance between them
(c) Electric forces between them
(d) Magnetic forces between them

29. Energy of a body due to its motion is called
(a) Heat energy (b) Kinetic energy
(c) Potential energy (d) Light energy

30. A moving ball stops due to the action of
(a) Nuclear Force (b) Frictional Force
(c) Electric Force (d) Magnetic Force

31. The energy stored in a stretched spring is
(a) Potential energy
(b) Kinetic energy
(c) Heat energy
(d) Elastic potential energy

32. In cells chemical energy is transformed into
(a) Kinetic energy (b) Potential energy
(c) Heat energy (d) Electrical energy

33. When a body is dropped from a certain height, the gravitational potential energy is converted into
(a) Elastic potential energy
(b) Chemical energy
(c) Kinetic energy
(d) Light energy

34. Human body converts chemical potential energy of food into
(a) Kinetic energy (b) Light energy
(c) Nuclear energy (d) Heat energy

35. Electrochemical energy is required for the working of
(a) Circulatory system
(b) Nervous system
(c) Excretory system
(d) Digestive system

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36. When the cat leaps for its prey then the chemical energy present in its muscles is converted to
(a) Potential energy then to light energy
(b) Potential energy then to kinetic energy
(c) Electrical energy then to heat energy
(d) Heat energy then to Nuclear energy

37. The energy stored in the fossil fuel is
(a) Chemical energy
(b) Heat energy
(c) Electrical energy
(d) Elastic potential energy

38. Semi-conductor is such a substance, whose ability to conduct current lies in between
(a) Conductors and insulators
(b) Conductors and superconductors
(c) Insulators and superconductors
(d) Wood and plastic

39. Though the temperature inside lighted electric bulb is around 2700°C, the filament does not burn because:
(a) The metal of which it is made is resistant to burning
(b) The oxygen necessary for combustion (and burning) is not available as the bulb is evacuated and filled with pure nitrogen or inert gases
(c) It does not burn in closed systems
(d) It is made of non-metallic substance

40. A remote control gadget (for TV etc.) has in it:
(a) A small electromagnet, that emits electromagnetic
(b) A small oscillator that emits electric pulses
(c) A small transmitter that emits infrared signals
(d) None of these

41. The atmosphere exerts enormous pressure on us. But we do not feel it because:
(a) We are used to it
(b) Our bones are very strong and can withstand this pressure
(c) The surface area of our head is very small
(d) Our blood exerts a pressure slightly more than that of the atmosphere.

42. Lightning is formed when:
(a) Similar charges of electricity rush towards each other and then get repelled
(b) Clouds strike against impurities in air and the friction burns up these impurities.
(c) Strong opposite charges in different clouds breakdown the resistance offered by the intervening air.
(d) Water vapour produces electricity in the clouds.

43. A semi-conductor is also used as
(a) Capacitor (b) Transformer
(c) Electronic motor (d) Rectifier

44. The wave which do not require any medium is
(a) Sound wave (b) Air waves
(c) Electromagnetic waves
(d) Water waves

45. Radio waves are
(a) Sound waves
(b) Electromagnetic waves
(c) Water waves
(d) Heat waves

46. A.C. voltage is
(a) Chemical quantity
(b) Digital quantity
(c) Analogue quantity
(d) Mathematical quantity

47. In Binary system, the figure 361 is written as
(a) 10101101 (b) 1001101
(c) 10110111 (d) 101101001

48. The device which converts analogue signal to digital signal is called
(a) Transformer (b) CPU
(c) Modem (d) Photodiode

49. For making laser, usually we use
(a) Uranium (b) Ruby
(c) Magnesium (d) Iron

50. Argon laser is used for operating the
(a) Eye cancer (b) Glaucoma
(c) Kidney stone (d) Bone disease

51. When light enters from rare to denser medium, it bends towards the normal line, it is called
(a) Reflection of light
(b) Diffraction of light
(c) Refraction of light
(d) Absorption of light

52. Electromagnetic waves travel with the
(a) Speed of light
(b) Speed of sound
(c) Speed of earth rotation
(d) Speed of sun rotation

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53. Sound travels faster in:
(a) Dry air than in water
(b) Wood than in iron
(c) Iron than in air
(d) Hydrogen than in water

54. Soldiers crossing a suspension bridge, always break steps, in case the frequency of vibration of their marching should coincide with that of the bridge and this is because of the phenomenon of:
(a) Refraction of sound
(b) Reverberation of sound
(c) Resonance of sound
(d) Echolocation of sound

55. On passing through food stuff, x-ray can kill the
(a) Fungus (b) Virus
(c) Bacterials (d) Insects

56. Which of the following gives correct descending order of elasticity in the substances?
(a) Rubber, silver, glass
(b) Silver, rubber, steel
(c) Steel, silver, rubber
(d) All have equal elasticity

57. Which of the following colour of light travel through, glass with minimum speed?
(a) Red (b) Violet
(c) Green (d) Yellow

58. A polaroid is
(a) A red light filter
(b) A device used for analysing polarized light
(c) A device used in polarimeter
(d) An adjustable shutter

59. When a beam of light is passed through a transparent medium, however clear or homogeneous the medium may be, there is always a certain amount of light scattered sideways, out of the beam. This is known as
(a) Rayleigh scattering
(b) Dispersion
(c) Raman effect (d) None of the above

60. The phenomenon of land and sea breeze is as a result of
(a) Conduction (b) Convection
(c) Radiation (d) None of these

61. The weight of a given object is maximum
(a) At the bottom of a 500 ft. deep mine
(b) At the top of a mountain 5,000 ft high
(c) At a distance of 100 km above the earth's surface
(d) At the surface of the earth

62. The flow of heat from a hot to a cold body is an example of
(a) Adiabatic process
(b) Irreversible process
(c) Revresible process
(d) Isothermal process

63. What makes the air coming out of a punctured tyre cool?
(a) Adiabatic expansion
(b) Flow at high speed
(c) Isothermal expansion
(d) None of the above

64. It takes much longer to cook things in the hills than in the plains, because:
(a) Atomspheric pressure is high in the hills and water boils at a higher temperature
(b) Atmospheric pressure is lower and water boils at a lower temperature
(c) Due to low atmospheric pressure in the hills the boiling point of water is raised and therefore water takes longer to boil
(d) The humid atmosphere in the hills absorbs a lot of heat, leaving very little for the cooking

65. The working of optical fibres is based on the .... of electromagnetic waves.
(a) Refraction (b) Reflection
(c) Total internal reflection
(d) Polarization

66. The needle of a magnetic compass
(a) Is affected only by permanent magnetics
(b) Rotates in the magnetic field of an electric current
(c) Aligns itself parallel to a magnetic field
(d) Aligns itself perpendicular to a magnetic field

67. Which of the following is true for capacitors in series?
(a) The total capacitance is the sum of the individual capacitance
(b) The total charge is the sum of the charges on each capacitor
(c) The total voltage is the sum of the voltage across each capacitor
(d) The available charge is shared between two or more capacitors

68. Condenser is used
(a) To produce charge
(b) To change the direction of current

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(c) To collect the charge
(d) As a good conductor of electricity

69. All the following statements are correct, except
(a) The presence of moisture in the air reduces the conductivity of charge
(b) When a body is charged positively, some electrons escape from it
(c) A body is said to be negatively charged when it has got some electrons
(d) None of the above statements is correct

70. Two parallel wires carrying current in the opposite direction
(a) Attract each other (b) Repel each other
(c) Do not exert any force on each other
(d) None of these

71. A car is running on a road at a uniform speed of 60 km/hr. The net resultant force on the car is:
(a) Driving force in the direction of car's motion
(b) Resistance force opposite to the direction of car's motion
(c) An inclined force
(d) Equal to zero

72. Which one of the following is not an advantage of AC over DC?
(a) The AC sows skin effect
(b) In AC a wide range of voltages is possible
(c) Lines loss in AC transmission lines are negligible
(d) In AC the magnitude of current can be reduced by a choke

73. Which of the following instruments may be used to measure A.C?
(a) Galvanometer
(b) Hot-wire ammeter
(c) Moving coil glavanometer
(d) None of these

74. Copper wires are generally used for electrical power transmission instead of iron wires because:
(a) Copper is a better conductor than iron
(b) Copper is cheaper than iron
(c) Copper can take higher power than iron
(d) Copper is lighter than iron

75. Permanent magnets are made from
(a) Diamagnetic substances
(b) Ferromagnetic substances
(c) Paramagnetic substances
(d) Dielectric substances

76. Which one of the following is not an advantage of three phase system of electric power supply over one phase system?
(a) The output voltage is higher
(b) The power consumption is less
(c) The total output is almost constant
(d) The output of a 3-phase machine is greater than that of a single phase machine

77. Ball bearings are used to reduce friction by:
(a) Applying lubricants to the balls used
(b) Reducing the area of contact with the use of metallic balls
(c) Increasing the area of contact with the use of metallic balls
(d) None of these

78. An electric motor runs on which principle?
(a) Electrical energy can be converted into chemical energy in the presence of magnetic fields
(b) A conductor carrying current in the direction perpendicular to the external magnetic field feels a force
(c) The current flowing through a conductor causes generation of heat that drives the engine
(d) Changing magnetic field induces an electromotive force in a conductor

79. Which of the following functions is performed by a photo cell?
(a) It converts chemical energy into electrical energy
(b) It converts magnetic energy into electrical energy
(c) It converts light energy into electrical energy
(d) It converts electrical energy into light energy

80. Electronics is the study of
(a) Flow of molecules (b) Flow of electrons
(c) Flow of photons (d) All are true

81. A car and a loaded truck are moving with the same speed along a road. As compared to the truck, the car shall possess
(a) More kinetic energy
(b) More potential energy
(c) Less kinetic energy
(d) More mechanical energy

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82. When a moving bus stops suddenly, the possengers are pushed forward because of the
(a) Friction between the earth and the bus
(b) Friction between the passengers and the earth
(c) Inertia of the passengers
(d) Inertia of the bus

83. Erect and virtual images are always produced by
(a) Plane and convex mirrors.
(b) Plane mirrors alone.
(c) Concave and convex mirrors.
(d) Concave mirrors alone.

84. The working of the receiver of a telephone depends upon the
(a) Change in magnetisation of an electromagnet, which causes a diaphragm to vibrate.
(b) Efficiency of the loudspeaker which enhances the loudness of sound.
(c) Conversion of electric signal, after its amplification into sound wave.
(d) Diaphragm which is made to vibrate by the incoming sound wave.

85. An old man, unable to apply a large force, wishes to use a screw jack for lifting his car wheels. If L is the length of the rod used to turn the jack and p is the pitch of jack screw, then he should use a jack in which
(a) L is large and p is large
(b) L is small and p is large
(c) L is large and p is small
(d) L is small and p is small

86. The hydraulic brakes used in automobiles is a direct application of:
(a) Archimedes' principle
(b) Toricellian law (c) Bernoulli's theorem
(d) Pascal's law

87. In T.V. transmission:
(a) Sound and video signals are transmitted simultaneously
(b) Sound is transmitted first and then the video signal follows
(c) Video signal is transmitted first, followed by sound signal
(d) Sound and video signals are transmitted from different places at the same time

88. Surface tension in a liquid is due to
(a) Adhesive force between the molecules
(b) Cohesive force between the molecules
(c) Gravitational force between the molecules
(d) Electrical force between the molecules

89. Springs of shock absorbers of automobiles and railway coaches are made of steel and not of rubber because steel is
(a) More durable than rubber
(b) Less expensive than rubber in the long run
(c) Less elastic than rubber
(d) More elastic than rubber

90. Why does the mercury column in the barometer fall rapidly before a severe storm?
(a) It is due to decrease in humidity in air
(b) It is due to the rise in atmospheric pressure
(c) It is due to the fall in atmospheric pressure
(d) It is due to the severe heat energy from the sun

91. Why does water boil below 100°C at higher altitudes?
(a) There is lesser dissipation of heat at higher altitudes
(b) Water available at higher altitudes is purer than that in the plains
(c) Pollution-free air at higher altitudes increases the calorific value of fuel used
(d) The atmospheric pressure at higher altitudes is low as compared to that at sea level

92. The speed of sound is maximum through which of the following?
(a) Air (b) Glass
(c) Water (d) Wood

93. Echo is the effect produced due to
(a) Absorption of sound
(b) Dispersion of sound
(c) Reflection of sound
(d) Refraction of sound

94. In a photographic camera fitted with a convex lens, which of the following types of images will be formed on the film?
(a) Erect and real
(b) Inverted and real
(c) Imaginary and erect
(d) The type of image formed will depend on the distance between the lens and the object

95. In the modern-day computers, when operational, the electrical impulses travel
(a) At the speed of sound

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(b) At seven times the speed of sound
(c) At half the speed of light
(d) Nearly at the speed of light

96. A magnet freely suspended by means of a string will always set itself in which of the following directions?
(a) East-West (b) North-East
(c) North-South (d) South-East

97. Why are shields made of iron usually provided around precision instruments?
(a) For protection against the effect of external magnetic fields
(b) For guarding the instruments against unauthorised handling
(c) For protection against the effect of moisture in the air
(d) For absorbing heat generated during the functioning of the instrument

98. Why are transformers used in the transmission of electric power?
(a) Because they speed up transmission
(b) Because they can conserve electrical energy
(c) Because they can reduce transmission losses
(d) Because they help to distribute electrical energy efficiently

99. A mixture of which of the following gases is used in the manufacture of electric bulbs?
(a) Nitrogen and Argon
(b) Nitrogen and Oxygen
(c) Oxygen and Argon
(d) Oxygen and Hydrogen

100. A fresh egg sinks in pure water, whereas it floats in saturated salty water. This is due to
(a) Higher density of the salty water
(b) Higher density of the pure water
(c) The fluid matter inside the egg-shell
(d) The fact that the egg-shell is made of calcium which is heavier than pure water

101. Through which of the following media does sound travel the fastest?
(a) Cool air (b) Warm air
(c) Cold water (d) Steel

102. Which of the following instruments is used for detecting and measuring small electric currents?
(a) Ammeter (b) Fluxmeter
(c) Galvanometer (d) Voltmeter

103. The lightning conductor or rod used for protecting buildings from lightning is made of
(a) Aluminium (b) Copper
(c) Iron (d) All of the above

104. What is the melting point of Tungsten?
(a) 500°C (b) 1,000°C
(c) 2,000°C (d) 3,000°C

105. Colours seen on oil films spread on water are seen because of
(a) Interference of light waves
(b) Refraction of light
(c) Reflection of light
(d) None of the above

106. A motorcar is moving with uniform velocity on a rough horizontal road. According to Newton's law of motion
(a) The kinetic energy of the car is increasing
(b) There is no unbalanced force acting on the car
(c) Forces are acting on the car
(d) The car is being accelerated

107. If a bimetallic strip is heated, it will
(a) Twist itself into a helix
(b) Not bend at all
(c) Bend towards the metal with higher thermal coefficient of expansion
(d) Bend towards the metal with lower thermal expansion coefficient

108. In an electronic watch, the component corresponding to the pendulum of a pendulum clock is:
(a) Transistor (b) Balance wheel
(c) Crystal oscillator (d) Diode

109. Why is the light of ordinary lamp hotter than the tubelight?
(a) It is due to incandescence
(b) It is due to ionisation of gases
(c) It has more surface for distribution of energy
(d) It gives white light

110. The resistance of a bulb rated 60 watts/220 volts is approximately
(a) 4 Ω (b) 40 Ω
(c) 400 Ω (d) 800 Ω

111. Sonar works on the principle of
(a) Reflection of sound
(b) Absorption of sound
(c) Reflection of radio-waves
(d) None of these

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112. When load is lifted from ground to a certain height, some work is done and energy is used up. This energy is converted into
(a) Internal energy of the body
(b) Heat and dissipated
(c) Potential energy of the body
(d) Heat as well as potential energy

113. A plant with green leaves placed in red light will appear
(a) Black (b) Green
(c) Red (d) Violet

114. The common refrigerant used in the domestic refrigerator is
(a) Neon (b) Freon/ammonia
(c) Spirit (d) None of these

115. Who said, 'A body will remain at rest unless an external force acts on the body'?
(a) Newton (b) Einstein
(c) Archimedes (d) Galileo

116. Which metal is commonly used as an electromagnet?
(a) Copper (b) Iron
(c) Nickel (d) Cobalt

117. Which of the following does not admit any division?
(a) Atom (b) Molecules
(c) Compound (d) All

118. The dynamo converts
(a) Mechanical energy into electrical energy
(b) Electrical energy into mechanical energy
(c) Mechanical energy into magnetic energy
(d) None of these

119. A red light is used in a traffic signal because
(a) It has the longest wavelength and can be easily noticed from a long distance
(b) It is beautiful
(c) It is visible to people even with bad eyesight
(d) None of these

120. Metals are good conductors of electricity because
(a) They contain free electrons
(b) The atoms are lightly packed
(c) They have high melting point
(d) All of the above

121. Water cannot be used to extinguish fire caused by an electric current because
(a) It may cause another short circuit
(b) It may cause hydrolysis
(c) It may cause electrocution
(d) It will spoil the wiring

122. In diesel engines ignition takes place by
(a) Compression (b) Electrical spark
(c) Dynamo (d) Battery

123. Cloudy nights are warmer because
(a) Clouds prevent radiation of heat from ground to air
(b) Of low atmospheric pressure
(c) Of the compact density of air
(d) More dust particles gather in the air

124. If we go to the Himalayas, we feel breathless because
(a) It is very cold there
(b) The density of air is much less on the hills so oxygen content is reduced
(c) The density of air is high on the hills reducing oxygen content
(d) None of these

125. In deserts clouds do not precipitate because of
(a) Low pressure (b) Low humidity
(c) High wind velocity (d) Low temperature

126. When an open bottle of scent is kept in a corner of the room, its odour is felt in all the corners. This is due to the phenomenon of:
(a) Vaporisation (b) Evaporation
(c) Diffusion (d) Sublimation

127. The process of transfer of heat by matter but without actual movement of the particles themselves is called
(a) Conduction (b) Convection
(c) Radiation (d) None of the above

128. What are ultrasonic waves?
(a) Sound waves having frequency shorter than audio-frequency range
(b) Sound waves produced in a vacuum
(c) Sound waves having frequency higher than audio-frequency range
(d) None of these

129. In the process of galvanization an iron sheet is coated with
(a) Aluminium (b) Zinc
(c) Tin (d) Galena

130. A radar which detects the presence of an enemy aircraft uses
(a) Sound waves (b) Radiowaves
(c) Electric waves (d) Ultrasonic waves

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131. Fish plates are used in railway tracks
(a) To avoid tracks being distorted due to temperature fluctuation
(b) To control speed of the train
(c) To connect two rails
(d) To keep the rails equidistant

132. Food is cooked quickly in a pressure cooker because
(a) Boiling point of water is decreased
(b) Boiling point of water is increased
(c) It absorbs heat quickly
(d) It retains heat for a long duration

133. In an earthen pot cooling of water depends upon
(a) Outside temperature
(b) Atmospheric humidity
(c) Wind (d) All of the above

134. A fuse wire is used to
(a) To make the electrical circuit strong
(b) Convert AC into DC
(c) Convert DC into AC
(d) Prevent an unduly high electric current to pass through a circuit

135. A molecule is
(a) A class of organic compounds
(b) The smallest unit of a substance that retains the properties of the substance
(c) The spectrum of a substance
(d) A small mass

136. The nucleus of an atom consists of
(a) Protons + Electrons
(b) Only proton
(c) Proton + Neutron + Electron
(d) Protons and neutrons

137. Four identical kettles with the same amount of water, have bases made of different metals of the same thickness. If these are placed on identical flames water will boil first in the kettle with a base made of
(a) Brass (b) Copper
(c) Aluminium (d) Steel

138. Sound travels with a different speed in different media. In what order does the velocity of sound increase in these media?
(a) Water, iron and air (b) Iron, air and water
(c) Air, water and iron (d) Iron, water and air

139. In electric fittings, the wires are earthed because
(a) In case of a short circuit, current passes to the earth
(b) It avoids leakage of electricity
(c) It completes the electric circuit
(d) It reduces fluctuation

140. Which of the following metals is used in aircraft?
(a) Chromium (b) Titanium
(c) Palladium (d) None of these

141. During rusting
(a) Iron gains weight (b) Iron loses weight
(c) Weight of iron remains unchanged
(d) Iron volatilizes

142. When water boils, its temperature
(a) Begins to increase (b) Begins to decrease
(c) Remains constant (d) Fluctuates

143. Rectifiers are used to convert
(a) DC to AC (b) AC to DC
(c) High voltage to low voltage
(d) Low voltage to high voltage

144. A needle smeared with vaseline when lowered slowly on the surface of water in a horizontal position appears to float. The phenomenon is an example of
(a) Capillary action (b) Surface tension
(c) Osmosis (d) Archimedes' principle

145. Which one of the following statements is correct?
A slab of ice kept in a room:
(a) Does not radiate heat
(b) Does not radiate heat but absorbs heat from the surrounding
(c) Radiates heat but absorbs more heat from the surrounding
(d) Radiates heat more than that absorbed by it from the surrounding

146. Phenomenon of formation of three dimensional image by interference of two light beams from laser or other coherent sources of light is called:
(a) Optical photography
(b) X-ray photography
(c) Radiography
(d) Holography

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147. Paper becomes brittle and yellow with age. Why?
1. The acid content in paper causes brittleness to develop
2. In the presence of visible light, photosensitised oxidation occurs
3. The ultra-violet component of sunlight causes photolysis of cellulose by direct cleavage of the cellulose polymer
(a) 1 and 2 (b) 2 and 3
(c) 1 and 3 (d) 1, 2 and 3

148. Two cars, passing each other at high speed, are in danger of side swiping because;
(a) Of the increase in air pressure in the space between them
(b) Of decrease in the velocity of air molecules between them
(c) Of decrease in air pressure in the space between them
(d) Increase in the velocity of air molecules between them

149. Which of the following is used as a coolant in nuclear reactors?
(a) Heavy water (b) Cadmium
(c) Liquid sodium (d) Graphite

150. Which of the following is good nuclear fuel?
(a) Uranium-238 (b) Neptunium-239
(c) Thorium-236 (d) Plutonium-239

151. In an atomic explosion, enormous energy is released which is due to the:
(a) Conversion of neutrons into protons
(b) Conversion of chemical energy into heat energy
(c) Conversion of chemical energy into nuclear energy
(d) Conversion of mass into energy

152. Optic fibres are mainly used for which of the following?
(a) Communication (b) Weaving
(c) Musical instruments (d) Food industry

153. Which of the following take place when the subject speaks untruth while being tested by the polygraph instrument?
1. His blood pressure goes up.
2. His pulse quickens.
3. His skin darkens.
4. He sneezes.
(a) 1 and 2 (b) 3 and 4
(c) 1, 2 and 3 (d) 2, 1 and 3

154. The following processes take place during the launching of a rocket:
1. Rocket fuel is burnt.
2. Gases are produced.
3. Rocket moves in the forward direction.
4. Gases come out with momentum in backward direction.

The correct sequential order in which the above processes occur, is:
(a) 1, 2, 3, 4 (b) 1, 3, 2, 4
(c) 1, 2, 4, 3 (d) 1, 3, 4, 2

155. Aviation fuel for jet aeroplanes consists of purified:
(a) Petrol (b) Kerosene
(c) Gasoline (d) Diesel

156. A silver spoon and a book are both at room temperature. The spoon feels colder to the touch because:
(a) Of an illusory effect
(b) Silver is an almost pure material
(c) Silver is a very good heat conductor
(d) It is made of a denser material

157. A liquid rises in a syringe when its piston is pulled up because:
(a) Of the property of surface tension
(b) Of capillary action
(c) Of the action of atmospheric pressure
(d) There is a force of cohesion between the liquid molecules and the glass syringe

158. A small weight is put on the pressure cooker. it increases the pressure of the steam because:
(a) The weight is proportionate to the steam required
(b) Area of contact is small
(c) The weight stops the steam from escaping
(d) Of Bernoulli's principle

159. When an electric bulb breaks, there is a mild bang due to:
(a) The chemical reaction between the enclosed gases
(b) The compressed gases rushing out suddenly
(c) The air rushing in to fill the evacuated space
(d) None of the above

160. Kinetic energy depends:
(a) On the mass of the moving body
(b) The velocity or speed of the moving body
(c) Pressure of the moving body
(d) Both mass and velocity of the moving body

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161. A bomb is dropped at a point from a moving aeroplane. The pilot observes that:
(a) The bomb traverses a curved path and falls some distance behind that point
(b) The bomb traverses a curved path and falls some distance ahead
(c) The bomb drops vertically downward
(d) The bomb remains stationary in the air for some time

162. When light passes from air into glass it experiences change in:
(a) Frequency and wavelength
(b) Frequency and speed
(c) Wavelength and speed
(d) Frequency, wavelength and speed

163. A person sitting in an open car moving at constant velocity throws a ball vertically upwards in air. If effect of air resistance is neglected, the ball will fall:
(a) Exactly in hands of the person
(b) Outside the cars
(c) In the car behind the person
(d) In the car ahead of the person

164. The difference between a nuclear reactor and an atomic bomb is that:
(a) No chain reaction takes place in nuclear reactor while in the atomic bomb there is a chain reaction
(b) No chain reaction takes place in atomic bomb while it takes place in nuclear reactor
(c) The chain reaction in nuclear reactor is controlled
(d) The chain reaction in nuclear reactor is not controlled

165. One should not connect a number of electric appliances to the same power socket because:
(a) The appliances will not get full voltage
(b) The appliances will not get proper current
(c) This can damage the appliances
(d) This can damage the domestic wiring due to overheating

166. A ship rises as it enters the sea from a river because the:
(a) Water in sea is hard water
(b) Larger quantity of water in the sea pushes the ship upwards
(c) Density of sea water is lower than that of the river water
(d) Density of sea water is higher than that of the river water

167. When a vehicle passes, TV reception gets distorted. This is because:
(a) Metal reflects radiowaves
(b) Spark plug creates electromagnetic disturbances
(c) Passing vehicle affects the sophisticated TV components
(d) Modem vehicles use electronic ignition system

168. Tiredness is felt on the top of the mountains because of:
(a) High temperature
(b) Low temperature
(c) High pressure outside the body
(d) Low pressure outside the body

169. Why is a cyclist required to bend inwards while moving in a circular path?
(a) To keep the vehicle on the road
(b) To make the centre of gravity fall with the base
(c) To produce the necessary centripetal force required to keep him moving in a curved path
(d) None of these

170. Heat received by earth from the Sun is known as
(a) Insulation
(b) Solar radiation
(c) Solar heat
(d) thermal radiation

171. Special theory of relativity was proposed by
(a) Isaac Newton
(b) Albert Einstein
(c) Galilee
(d) Robert Hook

172. Isaac Newton gave
(a) Law of Planetary Motion
(b) Laws of Motion and Laws of Gravitation
(c) Law of Geometry
(d) None of these

173. The celebrated scientist Isaac Newton was
(a) British
(b) Dutch
(c) Italian
(d) French

174. Mechanics is the study of
(a) Forces acting on bodies
(b) Movement of bodies
(c) Angle of bodies
(d) Shape of bodies

175. Sodium chloride is commonly called as
(a) Washing soda
(b) Gypsum
(c) Common salt
(d). Plaster of Paris

176. Dynamics is the study of
(a) Movements of earth
(b) Movement of bodies
(c) Angles of bodies

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(d) Forces acting on bodies

177. Which instrument is used to measure very high temperature?
(a) Tachometer (b) Pyrometer
(c) Udometer (d) Lactometer

178. Which of the following layer of atmosphere make radio transmission possible?
(a) Ionosphere (b) Troposphere
(c) Hydrosphere (d) Stratosphere

179. What is the speed of sound in dry air?
(a) 500 km/s (b) 550 km/s
(c) 610 km/s (d) 710 km/s

180. Which instrument is used to measure minute electrical currents?
(a) Seismograph (b) Polygraph
(c) Manometer (d) Galvanometer

181. Which device is used to measure the specific gravity of a liquid?
(a) Barometer (b) Ammeter
(c) Manometer (d) Hydrometer

182. Which device is used to measure humidity?
(a) Tachometer (b) Hydrometer
(c) Hygrometer (d) Galvanometer

183. What splits light into its spectrum?
(a) Ionometer (b) Spectrometer
(c) Manometer (d) Stereoscope

184. Angstrom is unit of which quantity?
(a) Force (b) Heat
(c) Resistance (d) Length

185. A beam of which colour light passing through a prism scatters in seven colours?
(a) Red (b) White
(c) Black (d) Yellow

186. Dyne is unit of what quantity?
(a) Heat (b) Length
(c) Force (d) Resistance

187. Ohm is unit of which quantity?
(a) Length (b) Heat
(c) Force (d) Resistance

188. Microphone is used to convert sound waves into
(a) Mechanical energy
(b) Kinetic energy
(c) Potential energy
(d) Electrical energy

189. If speed of rotation of earth increase what effect it would have on the weight of your body?
(a) Weight decreases
(b) Weight increases
(c) Remains the same

190. The art of designing sequence of movements in which motion form or both are specified like dance motion is called
(a) Choreography (b) Dactylography
(c) Plerytography (d) Metallography

191. In which medium the sound travels fastest?
(a) Steel (b) Water
(c) Wood (d) Glass

192. Which instrument measure speed of ship?
(a) Periscope (b) Angstrom
(c) Sextant (d) Monometer

193. One horse power is equal to how many. Watt?
(a) 820 Watt (b) 780 Watt
(c) 760 Watt (d) 746 Watt

194. The acceleration caused by gravity per second is
(a) 52 m (b) 48 m
(c) 45 m (d) 40 m

195. Which wave travel with almost the velocity of light?
(a) Ultra-sonic wave (b) Radio wave
(c) Blue wave (d) Solar wave

196. The frequency of which of the following is highest?
(a) Light waves (b) Ultrasonic waves
(c) Radio waves (d)

197. Speed of sound in air is
(a) 480 m/s (b) 331 m/s
(c) 300 m/s (d) 280 m/s

198. LASER stands for
(a) Light Against Skin by Emission of Radiation
(b) Long Altitude Sight Emission Rays
(c) Light Amplification by Stimulated Emission of Radiation
(d) Left Align Sound Emission Rays

199. FM stands for
(a) Frequency Module
(b) Frequency Movement
(c) Frequency Modulation
(d) Ferentition Module

200. One million cycle per second is called
(a) Megabyte (b) Megahertz
(c) Gigabyte (d) Hedabyte

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ANSWERS

1	c	2	d	3	d	4	d	5	c	6	b	7	b	8	a	9	a	10	b
11	d	12	c	13	d	14	a	15	b	16	d	17	a	18	b	19	d	20	b
21	d	22	b	23	a	24	d	25	b	26	d	27	c	28	c	29	b	30	b
31	d	32	d	33	c	34	d	35	b	36	b	37	a	38	a	39	b	40	c
41	d	42	c	43	d	44	c	45	b	46	c	47	d	48	c	49	b	50	b
51	c	52	a	53	c	54	c	55	c	56	c	57	b	58	b	59	a	60	b
61	d	62	d	63	a	64	b	65	c	66	c	67	c	68	c	69	a	70	a
71	d	72	a	73	b	74	a	75	b	76	a	77	b	78	b	79	c	80	a
81	c	82	c	83	a	84	d	85	b	86	d	87	a	88	b	89	d	90	c
91	d	92	b	93	c	94	b	85	d	96	c	97	a	98	c	99	c	100	a
101	d	102	c	103	b	104	d	105	a	106	b	107	d	108	c	109	a	110	d
111	a	112	c	113	a	114	b	115	a	116	b	117	a	118	a	119	a	120	a
121	a	122	a	123	a	124	b	125	b	126	c	127	a	128	c	129	b	130	b
131	b	132	b	133	d	134	d	135	b	136	d	137	b	138	c	139	a	140	c
141	a	142	c	143	b	144	b	145	b	146	d	147	d	148	c	149	c	150	d
151	d	152	a	153	a	154	c	155	b	156	c	157	c	158	b	159	c	160	d
161	b	162	c	163	a	164	c	165	d	166	d	167	b	168	d	169	c	170	b
171	b	172	b	173	a	174	a	175	c	176	b	177	b	178	a	179	b	180	d
181	d	182	c	183	b	184	d	185	b	186	c	187	d	188	d	189	a	190	a
191	d	192	b	193	d	194	a	185	b	196	c	197	b	198	c	199	c	200	b

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CHEMISTRY

1. Which of the following gases is used in fire extinguishers?
(a) Oxygen (b) Hydrogen
(c) Water vapour (d) Carbon dioxide

2. Stains of rust from iron on cloth can be removed by
(a) Hydrogen peroxide (b) Alcohol
(c) Oxalic acid (d) Petrol

3. Cooking gas is a mixture of which of the following two gases?
(a) Methane and Carbon dioxide
(b) Oxygen and Nitrogen
(c) Bautane and Propane
(d) Oxygen and Methane

4. Nameplates made of brass get discoloured in air because of the presence of which of the following gases in the air?
(a) Oxygen (b) Nitrogen
(c) Carbon dioxide (d) Hydrogen sulphide

5. On addition of salt to water, its
(a) Boiling point increases
(b) Boiling point decreases
(c) Boiling point is not affected
(d) Freezing point increases

6. Which of the following gases does not pollute air?
(a) Carbon dioxide
(b) Carbon monoxide
(c) Nitrogen dioxide
(d) Sulphur dioxide

7. The inorganic natural resource of the earth is
(a) Mineral fuels (b) Wood
(c) Coal (d) Microbes

8. Which one of the following has the highest fuel value?
(a) Hydrogen (b) Charcoal
(c) Natural gas (d) Gasoline

9. The characteristic odour of garlic is due to
(a) A chloro compound
(b) A sulphur compound
(c) A fluorine compound
(d) Acetic acid

10. Which of the following group of compounds constitute carbohydrates?
(a) Fats and sugar
(b) Fats, sugar and proteins
(c) Starch, sugar and proteins
(d) Starch and sugar

11. What is the chemical name of Baking Soda?
(a) Sodium bicarbonate
(b) Sodium Nitrate
(c) Sodium Carbonate
(d) Potassium

12. Milk lacks in one important nutrient; which?
(a) Calcium (b) Iron
(c) Potassium (d) Protein

13. Ripening of fruits is hastened by which of the following gases
(a) Hydrogen (b) Carbon dioxide
(c) Methane (d) Ethylene

14. Iron articles rust because of the formation of
(a) ferrous chloride
(b) a mixture of ferrous and ferric hydroxide
(c) sodium carbonate
(d) ferric chloride

15. Gunpowder consists of
(a) 75% potassium nitrite + 15% charcoal + 10% sulphur
(b) 75% potassium nitrite + 10% charcoal + 15% sulphur
(c) 75% potassium nitrate + 10% charcoal + 15% sulphur
(d) 75% potassium nitrate + 15% charcoal + 15% sulphur

16. X-rays are produced when a stream of electrons in an X-ray tube?
(a) Hits the glass wall of the tube
(b) Srikes metal target
(c) Pass through a strong magnetic field
(d) None

17. In the periodic table, elements have been arranged?
(a) In order of increasing volume
(b) In order of increasing atomic number
(c) In order of increasing atomic weights
(d) In order of increasing density

18. Which group of elements in the periodic table show highest first ionisation potential. Elements in the
(a) Left hand top corner
(b) Left hand bottom corner
(c) Right hand top corner
(d) Right hand bottom corner

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19. When we move from left to right in second period, the atomic volume of the element?
(a) Increases
(b) Increases with constant state
(c) Decreases
(d) None of these

20. Generally in a given period in the periodic table, as we move from left to right, the electropositive character of elements
(a) Increases
(b) Decreases
(c) Neither increases nor decreases
(d) Decreases then increases

21. Atom bomb is based on the principle of?
(a) Nuclear fusion
(b) Nuclear fission
(c) Radioactive
(d) Nuclear fission and fusion both

22. Oxidation involves:
(a) Gain in electrons (b) Gain of hydrogen
(c) Loss of electrons (d) Combustion

23. The substances are radioactive, which have?
(a) Electrons in their nuclei
(b) Nuclei with less number of neutrons
(c) Unstable nuclei
(d) Electrons removed from the outermost shell

24. When nuclear energy is intended to be harnessed for generation of electricity, potentially destructive neutrons released in a nuclear reactor are absorbed by?
(a) Heavy water
(b) Long rods of Cd
(c) Cubical blocks of steel
(d) A pile of blocks made of graphite

25. Nuclear power reactors are operated at low temperatures and consequently with lower efficiency because?
(a) Nuclear heat is carried by ordinary steam
(b) Uranium is difficult to heat
(c) The walls of nuclear reactors can not withstand high temperature
(d) High pressure inside the reactor reduces the temperature

26. The energy emitted from the sun is supposed to be due to
(a) Nuclear fission
(b) Nuclear fusion
(c) Combustion of hydrogen
(d) Combustion of He
(e) Radioactive disintegration

27. In a hydrogen bomb, hydrogen is converted into?
(a) Barium (b) Uranium
(c) Uranium – 238 (d) Helium

28. When two ice cubes are pressed over each other they unite to form one cube. Which of the following force is responsible for holding them together?
(a) Vander Walls forces
(b) Covalent attraction
(c) Hydrogen bond formation
(d) Dipole dipole attraction

29. The high boiling point of water is due to?
(a) Weak dissociation of water molecule
(b) Hydrogen bonding among water molecules
(c) Its high specific heat
(d) Its high dielectric constant

30. Ice has an open structure compared to water due to which it floats on water and occupies a greater volume of space. The open structure of ice is due to?
(a) Solid state of ice (b) Its low density
(c) Crystalline nature
(d) Hydrogen bonding

31. A gas can be liquefied by pressure alone when its temperature is?
(a) Higher than the critical temperature
(b) Lower than its critical temperature
(c) Equal to its critical temperature
(d) None

32. Gases can be compressed to a greater extent because?
(a) Molecules are elastic
(b) There is no gap between molecules
(c) These are lighter than liquids
(d) There is a large space between the molecules

33. The cooling caused by the expansion of a compressed gas below its inversion temperature without doing external work is called?
(a) Joule Thomson effect
(b) Adiabatic demagnetism
(c) Faraday Tyndall effect
(d) Compton effect

34. Which of the following solutions will have the highest boiling point?
(a) 1% glucose in water
(b) 1% Sucrose in water
(c) 1% NaCl in water
(d) 1% $CaCl_2$ in water

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35. Sea water is converted into fresh water by using the phenomenon of
(a) Plasmolysis (b) Sedimentation
(c) Reverse osmosis (d) Diffusion

36. When glycerine is added to a litre of water, which of the following is observed?
(a) Water evaporates more easily
(b) The temperature of water increases
(c) The freezing point of water is lowered
(d) The viscosity of water is lowered

37. At high altitudes the boiling point of water decreases because?
(a) Atmospheric pressure is low
(b) Temperature is low
(c) Atmospheric pressure is high
(d) Water is cold

38. A pressure cooker reduces cooking time because?
(a) Heat is more evenly distributed
(b) B.P. of water inside the cooker is increased
(c) The high pressure tenderises the food
(d) A longer flame is used

39. Smoke is an example of?
(a) Gas dispersed in liquid
(b) Gas dispersed in solid
(c) Solid dispersed in gas
(d) Solid dispersed in solid

40. Milk is a colloid in which?
(a) A liquid is dispersed in a liquid
(b) A solid is dispersed in a liquid
(c) A gas is dispersed in a liquid
(d) Some sugar is dispersed in water

41. Butter is a colloid. It is formed when?
(a) Fat is dispersed in solid caesin
(b) Fat globul are dispersed in water
(c) Water is despersed in fat
(d) Globulin is suspended in H_2O

42. Milk can be preserved by a few drops of?
(a) Formic acid solution
(b) Formaldehyde solution
(c) Acetic acid solution
(d) Acetaldehyde solution

43. Detergent action of soaps and synthetic detergents is due to their?
(a) Interfacial area
(b) High molecular weight
(c) Ionisation
(d) Emulsifying properties

44. Gelatin is often used as an ingredient in the manufacture of ice cream. The purpose of adding gelatin is
(a) To prevent formation of colloidal solution
(b) To stabilize the colloids and prevent crystal growth
(c) To improve the flavour
(d) To increase the bulk

45. Digestion of fats in the intestines is aided by
(a) Hydrolysis
(b) Oxidation
(c) De-emulsification
(d) Emulsification

46. The rate of chemical reaction depends on the nature of chemical reactants, because?
(a) Energy of activation differs from one reactant to another
(b) Some of the reactants are solid at room temperature
(c) Some of the reactants are coloured
(d) All are correct

47. A closed flask contains water in all its three states, solids liquid and vapour at 0°C. In this situation the average K.E of the water molecule will be?
(a) Maximum in vapour state
(b) Maximum in solid state
(c) Greater in the liquid than in vapour state
(d) Same in all the three states

48. The reaction taking place at anode and cathode are respectively?
(a) Oxidation, reduction
(b) Reduction, oxidation
(c) Reduction, hydrolysis
(d) Oxidation, hydrolysis

49. During electrolysis, metals are deposited at the cathode, because the cathode,
(a) Supplies electrons
(b) Withdraw electrons
(c) Undergoes oxidation
(d) None is correct

50. With the rise in temperature conductivity of metals?
(a) Decreases
(b) Increases
(c) Remains unchanged
(d) May decrease or increase

51. Heavy water is known as heavy because it?
(a) Is denser than ordinary water
(b) Is an oxide of deuterium
(c) Has a heavy or bad tastes

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(d) Has a heaver isotope of hydrogen

52. On descending a group in a periodic table electropositive character of elements?
(a) Increases (b) Decreases
(c) Remains same (d) None

53. In the periodic table on moving from left to right across a period, the metallic character of an element?
(a) Increases
(b) Decreases
(c) Increases and then decreases
(d) Remains constant

54. Mendeleev's periodic table is upset by the fact that?
(a) Noble gases do not form compounds
(b) Atomic weight of elements are not always whole numbers
(c) Many elements have several isotopes
(d) Some groups stand divided into two subgroups A and B

55. Most of the known elements are?
(a) Metals
(b) Non-metals
(c) Transition metals
(d) Inner transition metals

56. Stainless steel does not rust because?
(a) Nickel present in it does not rust
(b) Iron forms a hard chemical compound with chromium present in it
(c) Chromium and nickel combine with iron
(d) Chromium forms an oxide layer that protects iron from rusting

57. The engines of the rocket that helped the Apollo II spacecraft to land on the moon used for rocket fuel power?
(a) O_2 (b) H_2
(c) Propane (d) Hydrazine

58. Many people died in London in 1952 as a result of air pollution caused by?
(a) Mist (b) Fog
(c) Smog (d) Smoke

59. Fluorocarbons are effective scavenger for ozone due to
(a) Photolytic reaction of O_2 producing Cl radicals
(b) Photolytic decomposition of O_3 producing O_2
(c) Photolytic decomposition of O_3 into Cl and O_2
(d) Photolytic production of oxides of nitrogen

60. Detergents are better than soaps because?
(a) They wash clothes better
(b) Absorb the hardness of water
(c) They are less affected by hard water
(d) They are less soapy

61. Chemically soap is?
(a) Base (b) Acid
(c) Salt (d) Hydrocarbon

62. Lipids are?
(a) Long chain fatty acid esters
(b) Long chain sulphonic acid esters
(c) Polymeric hydrocarbons
(d) Polymeric aldehydes

63. Digestion of fat in intestine is aided by?
(a) Diffusion (b) Protection
(c) Peptization (d) Emulsification

64. Firdous Al Hikmat Fe Ilmul Kemia was written by
(a) Alberuni (b) Jabir bin Haiyan
(c) Khalid bin Yazeed (d) Buali Sina

65. Ammonia was obtained from urine by
(a) Aljahiz (b) Wohler
(c) Jabir bin Haiyan (d) Al-Beruni

66. Madam Curie is famous for his work in the field of
(a) Biochemistry
(b) Nuclear chemistry
(c) Analytical chemistry
(d) Organic chemistry

67. Who was first to prepare sulphuric acid?
(a) Aristotle (b) Dalton
(c) Bohr (d) Jabir Bin Hayan

68. Dalton's atomic theory gave the concept of
(a) Valency (b) Electrons
(c) Radioactivity (d) Ionization

69. When radioactive rays are passed through air or any gas, they cause it to
(a) Ionize (b) Evaporate
(c) Freeze (d) Boil

70. The elements in the first period of the periodic table are
(a) Hydrogen and helium
(b) Hydrogen, helium, nitrogen and oxygen
(c) Hydrogen, helium and carbon
(d) Hydrogen, nitrogen and oxygen

71. The reason for chlorinating water is
(a) To propagate germs

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(b) To add taste
(c) To add minerals
(d) To kill germs

72. Cooling of vapors of some compounds change them directly into solid state. This phenomenon is called
(a) Sublimation (b) Evaporation
(c) Condensation (d) Crystallization

73. Carbonated drinks are examples of
(a) Gas in gas (b) Gas in water
(c) Gas in solid (d) Solid in liquid

74. Smoke is a solution of
(a) Solid in solid (b) Solid in liquid
(c) Solid in gas (d) Gas in gas

75. Fog is an example of
(a) Gas in gas (b) Gas in liquid
(c) Liquid in gas (d) Liquid in liquid

76. The common battery used in automobiles is
(a) Iron storage battery
(b) Copper storage battery
(c) Lead storage battery
(d) Silver storage battery

77. Which acid is present in sour milk
(a) Citric acid (b) Tartaric acid
(c) Lactic acid (d) Formic acid

78. The water that can produce good lather with soap is known as
(a) Soft water (b) Hard water
(c) Heavy water (d) Atomic water

79. Which of the following is/are purest form of carbon?
(a) Diamond (b) Graphite
(c) Bucky ball (d) Marble

80. The glitter of diamond is
(a) Because it is transparent
(b) Because it is a non-conductor
(c) Due to its quality of reflecting light
(d) Because of its density

81. In colourful diamond, different colours are present due to:
(a) Impurities
(b) Angular bonds between the carbon atoms
(c) Different patterns of carbon chains
(d) None of the above

82. All of the followings are different uses of hydrogen peroxide except
(a) Used as bleaching agent
(b) Used to deodour sewers
(c) Used as feul in space
(d) Used to prepare organic peroxides

83. Ozone is present in which of the following layers of atmosphere
(a) Troposphere and Thermosphere
(b) Troposphere and Stratosphere
(c) Mesosphere (d) Thermosphere

84. In Pakistan and other countries which of the following methods is used in manufacture of sulphuric acid.
(a) Contact process (b) Frasch method
(c) Ostwald's method (d) Haber's process

85. The process of smelting and cooling converts pig iron into
(a) Silicon Steel (b) Cast iron
(c) Wrought iron (d) Steel

86. Pure iron is obtained by the reduction of which of the followings in the blast furnace
(a) Haematite (b) Megnetite
(c) Iron oxide (d) Limonite

87. Methane is used in daily life with the name of
(a) Carbon dioxide
(b) Natural gas
(c) Carbon monoxide
(d) Calcium carbonate

88. When electricity is passed through neon it glows.
(a) Blue (b) Green
(c) Red (d) Yellow

89. Argon and which gas is used in various types of flourescent and phototubes
(a) Oxygen (b) Helium
(c) Neon (d) Krypton

90. Enzymes are
(a) Chemical catalyst (b) Biological catalyst
(c) Organic catalyst
(d) Inorganic catalyst

91. Atomic weight of uranium is
(a) 237 (b) 238
(c) 226 (d) 242

92. Which among the following is in liquid state at normal room temperature?
(a) Mercury (b) Sodium
(c) Phosphorus (d) None of these

93. Which of the following gases is used in cigarette lighters?
(a) Butane (b) Methane
(c) Propane (d) Radon

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94. Liquefied petroleum gas (LPG) consists of
(a) Butane and propane
(b) Ethane and hexane
(c) Ethane and nonane
(d) None of these

95. Which of the following is fire resistant?
(a) Asbestos (b) Gypsum
(c) Dolomite (d) None of these

96. Which of the following is used for silvering of mirrors?
(a) Silver nitrate (b) Zinc nitrate
(c) Silver oxide (d) Pitchblende

97. Raw materials used for manufacture of glass are
(a) Sand/soda/limestone
(b) Sand/charcoal/soda
(c) Limestone/charcoal/sulphur
(d) Sand/sulphur/soda

98. Solder is an alloy of
(a) Tin and lead (b) Tin and zinc
(c) Zinc and lead (d) Zinc and copper

99. Why does milk curdle?
(a) Fermentation of lactose
(b) Reaction of microbes
(c) Over heating
(d) Fungus growth

100. Which of the following is the lightest gas?
(a) Nitrogen (b) Hydrogen
(c) Ammonia (d) Carbon dioxide

101. In vulcanisation, natural rubber is heated with:
(a) Carbon (b) Sulphur
(c) Silicon (d) Phosphorus

102. Which one of the following does not wet the walls of the glass vessel in which it is kept?
(a) Water (b) Alcohol
(c) Mercury (d) None of these

103. Dialysis is used for people with defective kidneys. It involves the process of:
(a) Adsorption (b) Osmosis
(c) Electropheresis (d) Diffusion

104. The substance coated on plastic tape-recorder tapes is:
(a) Zinc oxide (b) Manganese oxide
(c) Iron sulphate (d) Iron oxide

105. Which form of phosphorus is used in safety matches?
(a) White phosphorus
(b) Yellow phosphorus
(c) Red phosphorus
(d) Black phosphorus

106. Permanent hardness of water can be removed by adding:
(a) Potassium permanganate
(b) Chlorine
(c) Bleaching powder
(d) Washing soda

107. The first synthetic fibre made by man was:
(a) Rayon (b) Nylon
(c) Polyester (d) Terrycott

108. Gypsum is added to cement clinker to:
(a) Increase the tensile strength of cement
(b) Bind the particles of calcium silicate
(c) Decrease the rate of setting of cement
(d) Facilitate the formation of colloidal gel

109. Production of chlorofluorocarbons (CFC) gas is used in which of the following domestic products?
(a) Television (b) Tubelight
(c) Cooking gas (d) Refrigerator

110. In fireworks, the green flame is produced because of:
(a) Mercury (b) Sodium
(c) Potassium (d) Barium

111. Mixture of two metals is called
(a) Dispersion (b) Alloy
(c) Mouse (d) Hard Drive

112. Dynamite was discovered by
(a) Daimler (b) Mosely
(c) Alfred Nobel (d) Freud

113. What is the chemical combination of laughing gas?
(a) Helium and Nitrogen
(b) Nitrogen and Hydrogen
(c) Nitrogen and Oxygen
(d) Hydrogen and Oxygen

114. Which of the following is the lightest element of the periodic table?
(a) Nitrogen (b) Carbon dioxide
(c) Hydrogen (d) Oxygen

115. Mixing of which material makes rubber more flexible?
(a) Graphite (b) Marble powder
(c) Sulphur
(d) Potassium permanganate

116. Which is the smallest unit of protein?
(a) Fatty acid (b) Glycerol
(c) Amino Acid (d) Calcium

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117. When heavy and unstable elements split into relatively smaller elements with the release of energy the process is called
(a) Fission (b) Fusion
(c) Diffusion (d) Infusion

118. Name the element which is common to all acids?
(a) Oxalic (b) Hydrogen
(c) Carbolic (d) Sulphuric

119. What is laughing gas called?
(a) Ferrous chloride (b) Sulphur dioxide
(c) Ferric hydroxide (d) Nitrous Oxide

ANSWERS

1	d	2	c	3	d	4	d	5	a	6	a	7	a	8	a	9	b	10	d
11	a	12	b	13	d	14	b	15	d	16	b	17	b	18	a	19	d	20	b
21	b	22	c	23	c	24	c	25	c	26	b	27	d	28	c	29	b	30	d
31	b	32	d	33	a	34	d	35	c	36	c	37	a	38	b	39	c	40	a
41	c	42	b	43	d	44	b	45	d	46	a	47	a	48	a	49	a	50	b
51	b	52	a	53	b	54	c	55	a	56	d	57	d	58	c	59	c	60	c
61	c	62	a	63	d	64	c	65	b	66	b	67	d	68	a	69	c	70	a
71	d	72	a	73	b	74	c	75	c	76	c	77	c	78	a	79	a	80	c
81	a	82	c	83	b	84	a	85	b	86	c	87	b	88	c	89	d	90	b
91	b	92	a	93	a	94	a	85	a	96	a	97	a	98	a	99	a	100	b
101	b	102	c	103	b	104	d	105	c	106	d	107	b	108	c	109	d	110	d
111	b	112	c	113	c	114	c	115	c	116	c	117	a	118	b	119	d		

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Chapter 2

BIOLOGICAL SCIENCES MCQs

CELL BIOLOGY

1. The cell was first discovered by
   (a) Leeuwenhoek
   (b) Robert Hooke
   (c) Robert Brown
   (d) Schleiden and Schwann

2. The cell theory stating that cell is the structural and functional unit of life was proposed by
   (a) Leeuwenhoek
   (b) Robert Hooke
   (c) Robert Brown
   (d) Schleiden and Schwann

3. The living organisms are different from non living things because
   (a) In living organisms the growth is internal while in non-living there is no growth
   (b) In living organisms the growth is external while in non-living things growth is internal
   (c) In living beings the growth is internal while in non-living things either there is no growth or it is external
   (d) There is no growth neither in living organism nor in non-livings

4. In a cell, protoplasm contains about ——— percent of water
   (a) 92 (b) 75
   (c) 50 (d) Less than 40

5. The jelly like substance present between the nucleus and cell membrane is called
   (a) Cytoplasm
   (b) Protoplasm
   (c) Chromoplasm
   (d) Sarcoplasm

6. The similar looking cells working together constitute
   (a) A tissue
   (b) An organ
   (c) An organ system
   (d) An organism

7. All cells arise from pre existing cells was proposed by
   (a) Schleiden and Schwan
   (b) Rudolf Virchow
   (c) Robert Brown
   (d) Charles Darwin

8. The formation of RNA from DNA is called
   (a) Translation
   (b) Replication
   (c) Transcription
   (d) Annihilation

9. A DNA strand is not directly involved in the synthesis of
   (a) Protein molecule
   (b) Messenger–RNA
   (c) Ribosomal–RNA
   (d) As another strand of DNA

10. The main function of cell membrane is
    (a) To give shape to the cell
    (b) To provide mechanical strength and support to cell
    (c) To provide protection to the cell organelles
    (d) To regulate the transport of substance into or outs of the cell

11. The structural and functional unit of life is
    (a) Tissue (b) Organ
    (c) Cell (d) None of these

12. The smallest cell is that of
    (a) Pleuropneumonia sp.
    (b) Amoebae sp.
    (c) Paramecium sp.
    (d) Hydra sp.

13. 'Fluid Mosaic Model' of plasma membrane is proposed by
    (a) Davson and Danielli
    (b) Singer and Nicholson
    (c) Schleiden and Schwann
    (d) Robertson

14. Read the following statements about the functions of protoplasm and select answer using the codes given below.
    1. It responds to light, heat and moisture
    2. It initiates and carries out all the processes concerned in the reproduction
    3. It grows in size and forms a shape
    4. It has a power of locomotion

    Codes:
    (a) 1 and 2 are true

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(b) 1, 3 and 4 are true
(c) 2, 3 and 4 are true
(d) 1, 2, 3 and 4 are true

15. Match List I with List II and select the correct answer using the codes given in below lists.

	List I		List II
A.	Hugo Von Mohl	1.	Discovered nucleus
B.	Robert Brown	2.	Postulated 'cell theory'
C.	Schleiden and Schwann	3.	Proposed 'organismal theory'
D.	De Bary and Sachs	4.	Proposed the term 'protoplasm'

Codes:

	A	B	C	D
(a)	4	1	2	3
(b)	1	4	3	2
(c)	2	3	1	4
(d)	3	2	4	1

16. Which of the following is called 'power house' of a cell?
(a) Nucleus (b) Lysosome
(c) Chromosome (d) Mitochondrion

17. Which organelle has the electron system in a cell?
(a) Nucleus (b) Lysosome
(c) Mitochondrion (d) Glogi body

18. The digestion of food material inside the cell is performed by
(a) Golgi bodies (b) Lysosomes
(c) Mitochondria (d) Chloroplasts

19. Ribosome was discovered by
(a) Benda (b) Clauda
(c) Porter (d) Palade

20. Match List I (Organisms/Cells) with List II (Types of chromoplast) and select the correct answer using the codes given below lists.

	List I	List II
A.	Green-algae	1.Phaeoplast
B.	Diatoms	2.Rhodoplast
C.	Red-algae	3.Elaioplast
D.	Angiospermic seeds	4.Chloroplast

Codes:

	A	B	C	D
(a)	1	3	4	2
(b)	4	1	2	3
(c)	3	2	1	4
(d)	2	4	3	1

21. Match List I with List II and select the correct answer using the codes given below lists.

	List I		List II
A.	Lysosomes	1.	Cytoskeleton
B.	Microsomes	2.	Autodigestion
C.	Microtubules	3.	Secretary granules
D.	Golgi bodies	4.	A fragment of ER

Codes:

	A	B	C	D
(a)	1	2	3	4
(b)	2	4	1	3
(c)	2	3	1	4
(d)	1	4	2	3

22. Function of centrosome is
(a) Initiation of cell division
(b) To provide site of cell division
(c) Inhibition of cell division
(d) None of the above

23. The nucleus was first identified by
(a) Singer (b) Robert Brown
(c) Altman (d) Singleton

24. The nucleus is separated from surrounding cytoplasm by a nuclear membrane which is
(a) Single and non-porous
(b) Double and non-porous
(c) Single and porous
(d) Double and porous

25. The cell which lacks nuclear membrane and some other organelles is known as
(a) Eukaryotic (b) Prokaryotic
(c) Karyokinesis
(d) None of the above

26. Consider the following statements.
Assertion (A): It is presumed that the dividing cell obtains energy by glycolysis.
Reason (R): During cell division, oxidative processes are minimum and the deficiency of O_2 has no visible effect on the process and speed of mitosis.
Of these statements
(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true but R is not the correct explanation of A
(c) A is true but R is false
(d) A is false but R is true

27. The common phase between aerobic and anaerobic respiration is called
(a) Kreb's or tricarboxylic acid cycle
(b) Glycolysis
(c) Oxidative phosphorylation
(d) None of the above

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28. One molecule of glucose during complete oxidation produces
(a) 30 molecules of ATP
(b) 38 molecules of ATP
(c) 40 molecules of ATP
(d) 48 molecules of ATP

29. Which of the following statements is wrong?
(a) An enzyme is carbohydrate acting as a catalyst in the metabolism of an organism
(b) The action of an enzyme is chemically specific
(c) Enzyme molecules are denatured on heating
(d) A very small amount of an enzyme can catalyse a large amount of a substrate

30. A coenzyme is a/an
(a) Nucleic acid
(b) Organic compound
(c) Carbohydrate that controls enzymatic activity
(d) Vitamin that acts with an enzyme

31. In mitosis type of cell division, the amount of DNA in daughter cells is
(a) Double the parent cell
(b) Half the parent cell
(c) Equal to the parent cell
(d) 1/4th of the parent cell

32. Which type of cell division occurs in cancer cells?
(a) Mitosis (b) Meiosis
(c) Both (a) and (b)
(d) Cell division does not occur

33. How many mitotic divisions are needed for a single cell to make 256 cells?
(a) 8 (b) 16
(c) 32 (d) 64

34. Meiosis was discovered by
(a) Kollikar (b) Kostof
(c) Farmer and Moore (d) Porter

35. Which of the following statements is not correct about meiosis?
(a) It occurs at the gambete formation
(b) It includes two successive divisions
(c) Doubling of chromosomes occur in pachytene stage
(d) The daughter cells are diploid and contain double the number of chromosomes as found in the parent cell

36. The correct sequence of substages of prophase I in meiosis is
(a) Leptotene, zygothene, pachytene, diplotene, diakinesis
(b) Zygotene, pachytene, diplotene, Leptotene, diakinesis
(c) Pachytene, Leptotene, diplotene, zygotene, diakinesis
(d) Diakinesis, Leptotene, zygotene, pachytene, diplotene

37. Consider the following statements.
Assertion (A): The prophase of first meiotic division is significant.
Reason (R): Most of the cytogenetical events viz. synapsis, crossing over etc. occur during prophase of first meiotic division.
Of these statements
(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true but R is not the correct explanation of A
(c) A is true but R is false
(d) A is false but R is true

38. In meiosis, crossing over takes place during
(a) Leptotene (b) Zygotene
(c) Pachytene (d) Diplotene

39. The main difference in plant and animal cell is of
(a) Nutrition (b) Growth
(c) Movement (d) Reproduction

40. Which of the following are called 'suicide bags' of a cell?
(a) Lysosomes (b) Centrioles
(c) Vacuoles (d) Nuclei

41. Who among the following applied 'cell theory' to animals?
(a) Schleiden (b) Schwann
(c) Purkinje (d) Robert Brown

ANSWERS

1	B	2	D	3	A	4	B	5	A	6	A	7	A	8	B	9	B	10	D
11	c	12	b	13	b	14	d	15	a	16	d	17	c	18	b	19	d	20	b
21	b	22	a	23	b	24	d	25	b	26	a	27	b	28	b	29	a	30	d
31	c	32	a	33	a	34	c	35	d	36	a	37	a	38	c	39	c	40	a
41	b																		

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PLANT KINGDOM

1. Viruses are believed to be
   (a) Living organisms
   (b) Non-living objects
   (c) A transitional group between non-living and living world
   (d) Living organisms which have lost the power of multiplication

2. The genetic material in viruses is/are
   (a) DNA (b) RNA
   (c) DNA or RNA (d) Both (a) and (b)

3. One of the interesting features of viruses is that they
   (a) Multiply only in the host cytoplasm
   (b) Are made up of proteins only
   (c) Are found only inside bacteria
   (d) Behave in the same manner as plants

4. In which of the following the genetic material is RNA?
   (a) T-2 bacteriophages
   (b) Tobacco mosaic virus
   (c) Rhizobium sp.
   (d) None of the above

5. Match List I (Bacteria) with List II (Types) and select the correct answer using the codes given in below lists.

List I	List II
A. Rhizobium	1. Iron oxidizing bacteria
B. Azotobacter	2. Symbiotic nitrogen fixing bacteria
C. Leptothrix	3. Lactic acid bacteria
D. Lactobacillus	4. Free-living nitrogen fixing bacteria

Codes:

	A	B	C	D
(a)	2	4	3	1
(b)	2	4	1	3
(c)	4	2	3	1
(d)	4	2	1	3

6. Refrigeration is a process which
   (a) Kills bacteria
   (b) Slows down the bacterial growth
   (c) Inactivates the bacteria
   (d) Plasmolyses the bacteria

7. Match List I with List II and select the correct answer using the codes given in below lists.

List I	List II
A. Cyanophyta	1. Green algae
B. Chlorophyta	2. Brown algae
C. Xanthophyta	3. Blue-green algae
D. Phaeophyta	4. Yellow-green algae

Codes:

	A	B	C	D
(a)	3	1	4	2
(b)	1	2	3	4
(c)	4	3	2	1
(d)	2	4	1	3

8. Which of the following organisms can serve as a bio-fertilizer for rice crop?
   (a) Blue-green algae
   (b) Rhizobium sp.
   (c) Mycorrhizal fungi
   (d) Azotobacter sp.

9. Match List I (Pigments) with List II (Names of Algae) and select the correct answer using the codes given in below lists.

List I	List II
A. Phycoerythrin	1. Sargassum
B. Fucoxanthin	2. Spirogyra
C. Absence of pigment	3. Porphyra
D. Chlorophyll	4. Harveyella

Codes:

	A	B	C	D
(a)	1	3	4	2
(b)	3	1	2	4
(c)	3	1	4	2
(d)	1	4	2	3

10. Fungus used as study material for cytological, genetical and biochemical research is
    (a) Neurospora sp.
    (b) Cercospora sp.
    (c) Aspergillus sp.
    (d) Helminthosporium sp.

11. The fungus which is the source of gibberellic acid is
    (a) Aspergillus (b) Mucor
    (c) Gibberella (d) Sardaria

12. Lichen is a permanent association of
    (a) Fungus and bacterium
    (b) Algae and virus
    (c) Virus and bacterium
    (d) Fungus and algae

13. Match List I with List II and select the correct answer using the codes given in below lists.

List I	List II
A. Liverwort	1. Sporangiophore
B. Fern	2. Rhizoids
C. Moss	3. Dwarf shoot

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D. Conifer 4. Rhizome

Codes:

	A	B	C	D
(a)	4	2	1	3
(b)	1	4	2	3
(c)	1	2	3	4
(d)	2	1	3	4

14. Which of the following plant groups represents 'vascular cryptograms'?
(a) Bryophytes (b) Pteriodophytes
(c) Gymnosperms (d) Angiosperms

15. Which of the following plants bears no fruits but produces seeds?
(a) Groundnut (b) Sugarcane
(c) Cycas (d) Almond

16. Winged-seeds are found in
(a) Cycas sp.
(b) Pinus sp.
(c) Papaver sp.
(d) None of the above

17. Pollination in gymnosperms is
(a) Entomophious
(b) Ornithophilous
(c) Anemophilous
(d) None of the above

18. Insectivorous plants are
1. Nepenthes 2. Drosera
3. Utricularia 4. Cuscuta
Select the correct answer using the codes given below.
Codes:
(a) Only 1 (b) 1 and 2
(c) 3 and 4 (d) 1, 2 and 3

19. Cuscuta sp. obtains nutrition through
(a) Haustoria
(b) Assimilatory roots
(c) Rhizome
(d) None of the above

20. Match List I with List II and select the correct answer using the codes given in below lists.

List I	List II
A. Fusiform root	1. Mirabilis
B. Napiform root	2. Carrot
C. Conical root	3. Turnip
D. Tuberous root	4. Radish

Codes:

	A	B	C	D
(a)	4	3	2	1
(b)	3	4	1	2
(c)	1	2	3	4
(d)	2	1	4	3

21. Ginger is an example of
(a) Tuber (b) Rhizome
(c) Corm (d) Bulb

22. Match List I with List II and select the correct answer using the codes given in below lists.

List I	List II
A. Potato	1. Root
B. Carrot	2. Stem
C. Onion	3. Leaf
D. Fig	4. Flower

Codes:

	A	B	C	D
(a)	1	2	3	4
(b)	2	1	3	4
(c)	1	2	4	3
(d)	2	1	4	3

23. Leaves are reduced to spine in Opuntia sp.
(a) To increase photosynthesis
(b) To conserve water
(c) To decrease the respiration rate
(d) Due to lack of space

24. Ficus bengalensis is the botanical name of
(a) Mango tree
(b) Peepal tree
(c) Neem tree
(d) Banyan tree

25. Head or capitulum inflorescence is found in
(a) Banana (b) Mulberry
(c) Sunflower (d) Coriander

26. Match List I with List II and select the correct answer using the codes given in below lists.

List I	List II
A. Catkin	1. Banana
B. Locusta	2. Cherry
C. Corymb	3. Mulberry
D. Spadix	4. Grasses

Codes:

	A	B	C	D
(a)	1	2	3	4
(b)	3	4	2	1
(c)	4	3	1	2
(d)	2	1	4	3

27. Match List I (Plants) with List II (Inflorescences) and select the correct answer using the codes given in below lists.

List I	List II
A. Euphorbia	1. Hypanthodium
B. Ocimum	2. Umbel
C. Ficus	3. Cyanthium
D. Coriander	4. Verticillaster

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Codes:

	A	B	C	D
(a)	4	3	2	1
(b)	1	2	3	4
(c)	2	1	4	3
(d)	3	4	1	2

28. Which of the following is true about double fertilization?
    (a) Two male gametes of pollen tube fuse with oospore and secondary nucleus of embryo sac separately.
    (b) Single male gamete of pollen tube fuses with oospore and secondary nucleus of embryo sac twice
    (c) Two male gametes of pollen tube fuse with oospore of embryo sac together
    (d) Two male gametes of pollen tube unite with secondary nucleus of embryo sac together.

29. The phenomenon in which seeds fail to germinate for some time even under favourable conditions is known as
    (a) Verbalization (b) Dormancy
    (c) Totipotency (d) Senescence

30. Which of the following is/are positively phototropic and negatively geotropic?
    (a) Plumule (b) Coleoptile
    (c) Radical (d) Both (a) and (b)

31. Which of the following is true about root-hairs?
    (a) They are outgrowths of epidermal cells
    (b) They are appendages of epidermal cells
    (c) They are prolongations of epidermal cells
    (d) Growth in length of epidermal cells is stimulated during their formation.

32. Match List I with List II and select the correct answer using the codes given in below lists.

List I	List II
A. Magnesium	1. Found in middle lamella
B. Calcium	2. A structural component of chlorophyll
C. Iodine	3. Required for enzyme activity
D. Manganese	4. Not important for plants

Codes:

	A	B	C	D
(a)	2	1	4	3
(b)	1	2	3	4
(c)	4	3	1	2
(d)	3	4	2	1

33. Nitrogen fixing symbiotic bacteria, Rhizobium sp. is associated with the ________ of leguminous plants.
    (a) Mesophyll cells of leaves
    (b) Nectaries of flowers
    (c) Cortex of stems
    (d) Nodules of roots

34. The three elements most needed in common fertilisers are
    (a) Sulphur, phosphorus and sodium
    (b) Nitrogen, potassium and phosphorus
    (c) Phosphorus, sodium and nitrogen
    (d) Calcium, phosphorus and potassium

ANSWERS

1	c	2	d	3	a	4	b	5	b	6	b	7	a	8	a	9	c	10	a
11	c	12	d	13	b	14	b	15	c	16	b	17	c	18	d	19	a	20	a
21	b	22	b	23	b	24	d	25	c	26	b	27	d	28	a	29	b	30	d
31	a	32	a	33	d	34	b												

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ANIMAL KINGDOM

1. The most primitive animals among invertebrates belong to
(a) Protozoa (b) Annelida
(c) Arthropoda (d) Porifera

2. Match List I (Protozoans) with List II (Locomotory Organs) and select the correct answer using the codes given in below lists.

List I	List II
A. Amoebae	1. Cilia
B. Euglena	2. No locomotory organ
C. Plasmodium	3. Pseudopodia
D. Paramecium	4. Flagella

Codes:

	A	B	C	D
(a)	1	2	3	4
(b)	3	4	2	1
(c)	4	3	1	2
(d)	2	1	4	3

3. Malarial parasite is transmitted by
(a) Culex (b) Anopheles
(c) Aedes (d) Mansonia

4. Match List I with List II and select the correct answer using the codes given in below lists.

List I	List II
A. Amoebic dysentery	1. Trypanosome
B. Sleeping sickness	2. Entamoeba
C. Kala-azar	3. Plasmodium
D. Malaria	4. Leishmania

Codes:

	A	B	C	D
(a)	1	2	3	4
(b)	2	1	3	4
(c)	2	1	4	3
(d)	1	2	4	3

5. Nearly all sponges possess an internal skeleton consisting of
(a) Connective tissue
(b) Skeletal tissue
(c) Spicules and sponging fibres
(d) None of the above

6. Water is expelled through an opening in the body of sponge, known as
(a) Osculum (b) Ostia
(c) Prosopyle (d) None of the above

7. Sponges are
(a) Free-swimming (b) Sessile
(c) Planktonic (d) None of the above

8. The cells in coelenterates which serve the function of paralyzing the prey by injecting poison are known as
(a) Amoebocytes (b) Pinacocytes
(c) Nematocysts (d) Choanocytes

9. Respiration in Hydra occurs through
(a) Gills (b) Book-lungs
(c) Lungs (d) Body surface

10. Which of the following statements is not true about Hydra?
(a) Nematocysts occur all over the body
(b) It bears temporary gonads
(c) Medusa is free-swimming stage
(d) Tentacles are few and hollow

11. Which of the following statements is not true about Platyhelminthes?
(a) Blood vascular system and respiratory system are absent
(b) Excretory system has flame cells
(c) There is no anus
(d) Reproductive system is least developed

12. Liver-fluke (Fasciola hepatica) is a parasite of
(a) Small intestine (b) Oesophagus
(c) Bile-duct (d) Blood

13. Ascaries is commonly known as
(a) Pin worm (b) Thread worm
(c) Round-worm (d) Glowworm

14. Male (M) Ascaris sp. can be differentiated from female (F) as the
(a) Posterior end of M is curved while that of F is straight
(b) Posterior end of M is straight while that of F is curved
(c) Anterior end of M is straight while that of F is curved
(d) None of the above

15. Earthworms are the friends of farmers because they
(a) Produce humus
(b) Eat bacteria
(c) Increase the fertility of soil
(d) Stop the growth of weeds

16. In leech, the salivary glands secrete a chemical which checks the blood coagulation, that is called
(a) Hypnotoxin (b) Antitoxin
(c) Hirudin (d) None of the above

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17. The valuable pearls are produced by
(a) Teredo (b) Cypraea
(c) Pinctada (d) Octopus

18. Read the following characters of reptiles and select the answer from codes given below.
1. They are cold-blooded animals
2. Skin is dry without any skin glands
3. Respiration takes place by skin and lung
4. Fertilization is external
Codes:
(a) 1 and 2 are correct
(b) 1, 2 and 3 are correct
(c) 1, 3 and 4 are correct
(d) 1, 2, 3 and 4 are correct

19. The only poisonous lizard is
(a) Varanus (b) Heloderma
(c) Chameleon (d) Phyronosoma

20. Which of the following statements is not true about birds?
(a) They are warm-blooded, aerial vertebrates
(b) Their fore-limbs are modified into wings
(c) Their heart is two-chambered
(d) Their beaks are without teeth

21. Read the following mammalian characters and select the correct option from the codes given below.
1. They are cold-blooded animals
2. Skin possesses sweat and sebaceous glands
3. External ears are absent
4. Heart is four-chambered
Codes:
(a) 1 and 2 (b) 1, 2 and 3
(c) 2 and 4 (d) 2, 3 and 4

22. In mammals, nails, horns and hooves are regarded as
(a) Epidermal outgrowth
(b) Connective tissues
(c) Cartilages
(d) Bones

23. The erythrocytes (RBC) are spherical and non-nucleated in all mammals except
(a) Rabbit (b) Man
(c) Camel (d) Horse

24. Aquatic mammals are characterized by the absence of
(a) Pinnae (b) Blubber
(c) Fleshy dorsal fins (d) None of the above

25. Which of the following is an aquatic adaptation?
(a) Elongated body
(b) Streamlined body
(c) Long back
(d) None of the above

26. Bony fish possess
(a) Blubber
(b) Air-bladder
(c) Both (a) and (b)
(d) None of the above

27. Aquatic mammals have
(a) No hairs and external ears
(b) Light and spongy bones
(c) Fin like expansion of the body
(d) All the above

28. Which of the following is wrongly matched?
(a) Whatle — Blubber
(b) Desert lizard — Hygroscopic skin
(c) Dolphins — Minutes eyes
(d) Angler fish — Bright colouration

29. Camel can live without water for many days because
(a) Water is formed in its body due to oxidation
(b) It has water sacs in the walls of the lumen of stomach
(c) It does not need water
(d) None of the above

30. Which of the following animals depend upon metabolic water produced in their body?
(a) Kangaroo rat (b) Iguana
(c) Camel (d) Platypus

31. Which of the following stores water in large intestine?
(a) Camel (b) Kangaroo rat
(c) Uromastix (d) Phrynosoma

32. The animals that live in caves are called
(a) Fossorial (b) Burrowing
(c) Cavernicoles (d) Crepuscular

33. During winters, the polar bear
(a) Hibernates
(b) Aestivates
(c) Remains active
(d) Shifts to warmer places

34. The animals which can tolerate wider ranges of salt concentrations are called
(a) Euryhaline (b) Stenohaline
(c) Catadromous (d) Anadromous

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35. Salmon, a fish living in the sea migrates to fresh water rivers for spawning. Such fishes are called
(a) Euryhaline (b) Stenohaline
(c) Catadromous (d) Anadromous

36. The somatic chromosome number in male honey bee is
(a) 16 (2n) (b) 32 (2n)
(c) 32 (n) (d) 16 (n)

37. Which of the following is characterized by the presence of polytene chromosome?
(a) Man (b) Snail
(c) Drosophila (d) Birds

38. Lampbrush chromosomes are found in
(a) Fish (b) Amphibians
(c) Reptiles and birds (d) All the above

39. Femoral glands in male lizard is used by lizard for
(a) Protection against predator
(b) Water proofing of the body
(c) Holding the female during copulation
(d) Keeping the skin moist

40. Which of the following structures is an epidermal outgrowth?
(a) Horns of rhinoceros
(b) Antlers of male deer
(c) Feathers of birds
(d) All the above

41. The hairs found during embryonic development of all mammals are called
(a) Filoplumes (b) Lanugo
(c) Remiges (d) Hamuli

42. In chameleon the colour-changing pigment known as chromatophores, is controlled by
(a) Hormones of pituitary gland
(b) Central nervous system
(c) Autonomic nervous system
(d) Environmental factors

43. Mucous gland is not found in the epidermis of
(a) Amphibians (b) Fishes
(c) Cyclostomes (d) Mammals

44. The dog perspires through
(a) Tongue (b) Skin
(c) The arm pit (d) Sole of the feet

ANSWERS

1	a	2	b	3	b	4	c	5	c	6	a	7	b	8	c	9	d	10	a
11	d	12	c	13	c	14	b	15	c	16	c	17	c	18	a	19	b	20	c
21	c	22	a	23	c	24	a	25	b	26	b	27	d	28	d	29	b	30	a
31	c	32	c	33	a	34	a	35	b	36	d	37	c	38	d	39	c	40	d
41	b	42	c	43	d	44	a												

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HUMAN BODY

1. The system of coiled tubes present in internal ear is
(a) Utriculus (b) Cochlea
(c) Semi circular canals
(d) None of the above

2. The order in which the bones of middle ear are arranged for amplification of sound waves is
(a) Incus malleus–stapes
(b) Malleus–incus–stapes
(c) Incus–stapes–malleus
(d) Malleus–stapes–incus

3. The middle ear is connected to pharynx by
(a) Eustachian tube (b) Auditory passage
(c) Utriculus (d) Semi circular canal

4. The taste buds for sweat taste are located in
(a) Front of tongue (b) Back of tongue
(c) Centre of tongue (d) All of the above

5. The thyroxin which regulates the metabolism of glucose is secreted by
(a) Pituitary gland (b) Parathyroid gland
(c) Adrenal gland (d) Thyroid gland

6. Heart beat is regulated by the working of
(a) Medulla oblongata
(b) diencephalon (c) Cerebrum
(d) Mid brain

7. Which part of lens in human is helpful in adjustment of focal length?
(a) Cornea (b) Mucus
(c) Ciliary body (d) Conjunctiva

8. Heart beat is controlled by a nodal tissue made up of specialized cardiac muscles called
(a) Myonemes (b) Purkinje fibres
(c) Telodendrites (d) Collagen fibres

9. Percentage of total blood pumped into human brain in each cardiac output is about
(a) 25% (b) 15%
(c) 50% (d) 75%

10. Blood clot sometimes formed in vessels blocking the flow of blood is called
(a) Bolus (b) Pus
(c) Ulcer (d) Thrombus

11. The fundamental properties of living organisms is
(a) Locomotion and movement
(b) Growth and reproduction
(c) Mobility and reproduction
(d) Mobility, growth and reproduction

12. Cartilage is a type of
(a) Epithelial tissue (b) Connective tissue
(c) Muscular tissue (d) Nervous tissue

13. The red blood cells are produced in
(a) Bone marrow (b) Liver
(c) Spleen (d) Blood plasma

14. In blood RBC and WBC are present in ratio of
(a) 1 : 10 (b) 1 : 100
(c) Spleen (d) 1 : 1000

15. The quick healing of a fracture requires a rich supply of
(a) Blood (b) Oxygen
(c) Water (d) Nerves

16. The skin acts as a storage organ because it stores
(a) Water (b) blood
(c) Both water and blood
(d) Hormones

17. When the atmospheric temperature is low, the body temperature is maintained by
(a) Increased thermogenesis
(b) Decreased thermogenesis
(c) Increased thermolysis
(d) Increased thermogenesis and reduced thermolysis

18. The skin layer which helps reduce the heat loss in cold climate is
(a) Epidermal layer
(b) Dermal layer
(c) subcutaneous layer
(d) Both a and b

19. The body part which prevents the entry of food into trachea is
(a) Pharynx (b) Epiglottis
(c) Tongue (d) Medulla oblongata

20. In addition to vitamins, body needs some minerals too. Among these minerals the iron is specifically necessary for
(a) Bone formation
(b) Thyroxin formation
(c) Haemoglobin formation
(d) Development of teeth

21. The approximate length of alimentary canal from mouth to anus is
(a) 4 metres (b) 6 metres
(c) 8 metres (d) 10 metres

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22. The approximate length of small intestine (ileum) in man is
(a) 1.6 metre (b) 2.6 metre
(c) 3.6 metre (d) 4.6 metre

23. The short, firm tube that is supported by cartilages and muscles and contain the vocal cord is
(a) Trachea (b) Bronchi
(c) Larynx (d) Nasal passage

24. The cells which produce and secrete the mucus in respiratory region are
(a) Mucus cells (b) Kupffer cells
(c) hepatic cells (d) Goblet cells

25. The total number of ribs present are
(a) Five pairs (b) Seven pairs
(c) Nine pairs (d) Twelve pairs

26. The main function of RBC (Red Blood Cell) is to
(a) Transport oxygen
(b) Transport haemoglobin
(c) Transport sodium ions
(d) Transport potassium ions

27. During one circuit of blood from lungs to the tissue and back through circulatory system, the percentage of haemoglobin giving up its oxygen to tissue is
(a) 50% (b) 75%
(c) 25% (d) 100%

28. In RBC, the synthesis of haemoglobin takes place in
(a) Nucleus (b) Ribsomes
(c) Mitochondria (d) Golgi apparatus

29. Every person has a special system for combating the different infections and toxic agents. This is composed of
(a) Leukocytes (b) Lymphoid tissue
(c) Macrophage system
(d) All of the above

30. The lymph is formed from
(a) Blood in arteries (b) Blood in veins
(c) Tissue fluid (d) Both a and b

31. In man the blood is supplied to kidney for ultrafiltration by
(a) Renal artery (b) Renal vein
(c) Kidney artery (d) Hepatic artery

32. The pair of kidneys are made of small structural and functional units called
(a) Neuron (b) Nephron
(c) Column's of Bertini
(d) Malphigian capsule

33. The total quantity of blood present in a person circulates through kidney in
(a) 2 to 3 minutes (b) 4 to 5 minutes
(c) 7 to 8 minutes (d) 10 to 11 minutes

34. The axial skeleton consist of
(a) Skull and vertebral column
(b) Skull, vertebral column and sternum
(c) Skull, vertebral column, sternum and ribs
(d) Skull, vertebral column and pectoral girdles

35. The humerus bone is present in
(a) Lower arm (b) Upper arm
(c) Lower leg (d) Upper leg

36. In man the endoskeleton is composed of
(a) Only cartilages
(b) Bones
(c) Both cartilages and bones
(d) Bones, cartilages and skeletal muscles

37. The number of phalanges in thumb is
(a) One (b) Two
(c) Three (d) Four

38. The skull contains
(a) 18 bones (b) 20 bones
(c) 22 bones (d) 28 bones

39. The body system responsible for controlling different bodily functions is
(a) Endocrine system (b) Skeletal system
(c) Nervous system (d) Digestive system

40. Which part of the brain is the seat of intelligence, memory association, imagination and will?
(a) Cerebrum (b) Cerebellum
(c) Medulla Oblongata
(d) None of the above

41. The breathing and heart beat is controlled by
(a) Cerebrum
(b) Cerebellum
(c) Hypothalamus
(d) Medulla oblongata

42. A relay station that communicates the impulse from one nerve cell to another is
(a) Perinerium septum
(b) Synapse
(c) Node of raniver
(d) Endoneurium

43. The nervous system is concerned with
(a) Regulation of external environment and responding to internal environment through sense organs

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(b) Regulation of internal environment and responding to external environment through sense organs
(c) Regulation of internal environment and responding to external environment through the motor nerves
(d) None of the above

44. The nerve endings present in papillae of skin under epidermis for touch are called
(a) Pacinian corpuscles
(b) Missioners corpuscles
(c) Glucostatic corpuscles
(d) Golgi tendon

45. The total refractive power of eye lens is
(a) 10 dioptres (b) 15 dioptres
(c) 20 dioptres (d) 24 dioptres

46. The lens system focuses the image of an object on
(a) Choroid (b) Cornea
(c) Retina (d) None of the above

47. The image created on retina in eye is
(a) Small, virtual and inverted
(b) Small, real and inverted
(c) Large, virtual and erect
(d) Large, real and inverted

48. In eye the focusing of image of an object is done by
(a) Forward and backward movement of lens
(b) Changing the curvature of lens
(c) Forward and backward movement of retina
(d) Both a and c

49. Which of the following is a tissue?
(a) Ovary (b) Kidney
(c) Lungs (d) Blood

50. Cardiac muscle fibres are
(a) Striated voluntary
(b) Striated involuntary
(c) Non-striated voluntary
(d) Non-striated involuntary

51. Haversian canals are present in
(a) Cartilages (b) Skin
(c) Bones (d) Muscles

52. Cells of the nerve tissue are called
(a) Axons (b) Neurons
(c) Dendrites (d) Schwann cells

53. A man respires about
(a) 72-80 times a minute
(b) 20-30 times a minute
(c) 40-50 times a minute
(d) 16-20 times a minute

54. Sweat glands in man occur all over the body except
(a) Palms and soles
(b) Stomach and mouth surface
(c) Head
(d) Lips and glans penis

55. The maximum temperature that the human skin can tolerate without getting blisters is
(a) 40°C (b) 60°C
(c) 80°C (d) 100°C

56. Which of the following enzymes hydrolyses starch into reducing sugars?
(a) Sucrose (b) Catalase
(c) Maltase (d) Amylase

57. Match List I (Enzymes) with List II (Substrates) and select the correct answer using the codes given in below lists.

List I	List II
A. Pepsin	1. Milk
B. Lipase	2. Starch
C. Ptyalin	3. Fat
D. Rennin	4. Protein

Codes:

	A	B	C	D
(a)	4	3	2	1
(b)	3	2	1	4
(c)	2	1	4	3
(d)	1	4	2	3

58. Man cannot digest cellulose. Herbivores, viz., rabbits, cows, can. The most important reasons for this is that
(a) They have very efficient grinding teeth
(b) They possess an enlarged section of the gut containing bacterial which breakdown the cellulose for them
(c) They produce the enzyme cellulase which digests the cellulose; human beings do not make this enzyme
(d) Human beings do not need to digest cellulose

59. Consider the following statements regarding keratin.
1. It is a protein
2. It is a hormone
3. It is present in hair
4. It is present in nails
Which of these statements are correct?
(a) 1 and 2 (b) 1 and 4
(c) 2 and 3 (d) 1, 3 and 4

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60. Which of the following statements is false about the vitamins?
(a) it is useful in metabolism
(b) It is useful in digestion
(c) It gives energy
(d) It is useful in growth

61. Which of the following groups of compounds constitute carbohydrates?
(a) Fats and sugar
(b) Fats, sugar and protein
(c) Starch, sugar and proteins
(d) Starch and sugar

62. Which of the following human organs is less susceptible to harmful radiations?
(a) Eyes (b) Heart
(c) Brain (d) Lungs

63. When there is a decrease in the concentration of oxygen in the blood, the rate of breathing
(a) Decreases
(b) Increases
(c) Does not change
(d) First decrease, then increase

64. The smallest blood vessel is called
(a) Vein (b) Artery
(c) Capillary (d) Aorta

65. Normal blood pressure of a man is
(a) 80/120 mm Hg
(b) 90/140 mm Hg
(c) 20/160 mm Hg
(d) 85/150 mm Hg

66. The function of pacemaker is
(a) Regulation of urine formation
(b) Regulation of digestion
(c) Initiation of heartbeat
(d) Initiation of respiration

67. 'Rh factor' is related with
(a) Space travel
(b) Blood transfusion
(c) Air pressure
(d) Blood pressure

68. If a patient has blood group AB and needs blood transfusion, he
(a) Should be given blood of AB group only
(b) Should be given blood of O group only
(c) Can be given blood of A or B group
(d) Can be given blood of AB, O, A or B group

69. Which of the following is a body builder?
(a) Proteins (b) Carbohydrates
(c) Vitamins (d) Fats

70. In a normal adult man, the daily urine output (in litres) on an average is
(a) 1.5 (b) 2.5
(c) 3.0 (d) 3.5

71. Match List I (Animals) with List II (Excretory Organs) and select the correct answer using the codes given in below lists.

List I	List II
A. Platyhelminthes	1. Malpighian tubules
B. Annelids	2. Kidneys
C. Insects	3. Flame cells
D. Mammals	4. Nephridia

Codes:

	A	B	C	D
(a)	3	1	4	2
(b)	1	3	4	2
(c)	4	3	1	2
(d)	3	4	1	2

72. An adult human being has 16 teeth on each jaw. In each half of the jaws, there are
1. Three molars
2. Two incisors
3. Two premolars
4. One canine

The correct sequence in which these teeth occur starting from the middle and going back wards in each half of the jaw is
(a) 1, 2, 3, 4 (b) 4, 2, 1, 3
(c) 4, 3, 2, 1 (d) 2, 4, 3, 1

73. In modern surgery, metal pins are used for holding the broken bones together. This pin is made of
(a) Copper (b) Stainless steel
(c) Aluminium (d) Titanium

74. The energy for the contraction of muscles is derived from the combustion of
(a) Minerals (b) Carbohydrates
(c) Proteins (d) Vitamins

75. 'Sodium pump' operates in
(a) Muscle contraction
(b) Heart beat
(c) Nerve impulse
(d) None of the above

76. Besides ear ossicles, the cavity of the middle ear in human beings contain
(a) Air (b) Endolymph
(c) Perilymph (d) Octoconia

77. The male sex hormone, testosterone is secreted by the
(a) Bartholin's glands

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(b) Cowper's glands
(c) Graafian follicle
(d) Leydig cells

78. A test-tube baby means, fertilisation of the ovum and development taking place in the
(a) Test tube
(b) Test tube and uterus respectively
(c) Uterus
(d) Uterus and test tube respectively

79. With which of the following is the term glomerulus associated
(a) Excretory system
(b) Digestive system
(c) Nervous system
(d) Reproductive system

80. The chamber behind the lens of eye is filled with a fluid known as
(a) Perylymph
(b) Aqueous humor
(c) Vitreous humor
(d) None of the above

81. Which of the following layer of eye is richly supplied with fine blood vessels?
(a) Sclerotic (b) Choroid
(c) Retina (d) All of these

82. In normal human adult the heart beats about ———— times per minute
(a) 62 (b) 72
(c) 82 (d) 86

83. The heart beat originates in
(a) S-A node
(b) Mistral valve
(c) A.V. node
(d) None of the above

84. In man, the ventricular systole lasts about
(a) 0.44 seconds (b) 0.48 seconds
(c) 0.4 seconds (d) 0.33 seconds

85. Which part of the tooth is covered by enamel?
(a) Root (b) Dentine
(c) Crown (d) All of these

86. Which of the following are called cheek teeth?
(a) Incisors and canines
(b) Premolars and molars
(c) Incisors and molars
(d) None of the above

87. In mammalian kidney the ultrafiltration occurs in
(a) Proximal tubules
(b) Distal tubules
(c) Loop of Henle
(d) Glomeruli

88. Which of the following teeth are absent in milk dentition?
(a) Premolars (b) Molars
(c) Canines (d) Incisors

89. The number of vertebrae in man is
(a) 23 (b) 28
(c) 33 (d) 43

90. The bone formed by the ossification of a tendon is termed as
(a) Cartilaginous bone
(b) Dermal bone
(c) Sesamoid bone
(d) All the above

91. The nerve endings which are sensory to pain are known as
(a) Chemoreceptors
(b) Algesireceptors
(c) Tangoreceptors
(d) Photoreceptors

92. Which one of the following is not associated with the digestive system?
(a) Pancreas (b) Liver
(c) Colon (d) Spleen

93. In man the sweet and acidic tastes are better detected by
(a) Lateral side of tongue
(b) Middle of tongue
(c) Tip of tongue
(d) Base of tongue

94. The Glands of Moll in the margins of human eye is a modified form of
(a) Sebaceous gland
(b) Ceruminous gland
(c) Sudorific gland
(d) Scent gland

95. What is the fluid between movable joints called?
(a) Lymph
(b) Synovial fluid
(c) Perylymph
(d) None of the above

96. Which of the following is the oil secreting gland at the base of eye in man?
(a) Meibomian gland
(b) Harderina gland
(c) Lacrimal gland
(d) All the above

97. The gland meant for the production of tears is
(a) Harderina gland

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(b) Meibomian gland
(c) Glans of Moll
(d) Lacrimal gland

98. Myopia is a defect in human eyes in which image is formed
(a) In front of retina and can be corrected by using a convex lens
(b) In front of retina and can be corrected by using a concave lens
(c) Behind retina and can be corrected by using a concave lens
(d) Behind the retina and can be corrected by using a convex lens

99. Formation of most of the ATP produced in respiration takes place in the
(a) Kreb's cycle
(b) Terminal respiratory pathway
(c) Ornithine cycle
(d) None of the above

100. Enzyme pepsin acts upon food at a pH of approximately
(a) 2 to change proteins into peptones
(b) 7 to change proteins into peptones
(c) 6 to change proteins into amino acids
(d) 12 to change proteins into proteoses

101. The quality of mammalian kidney to form a concentrated urine can be attributed to the kidney's
(a) Loop of Henle
(b) Glomerulus
(c) Bowman's capsule
(d) Collecting duct

102. The nods of Ranvier are
(a) The points at which axon is exposed
(b) Area in which axon swells up
(c) Area where myelin sheath touches the nerves
(d) The points at which axon divides into axonates

103. A major technique for DNA finger printing to identify restriction fragments of DNA from any individual involves
(a) Southern blotting
(b) Density sedimensation
(c) Northern blotting
(d) Gas-liquid chromatography

104. When a Rh^- person is given Rh^+ blood for the first time
(a) There is always harmful reaction
(b) There is always useful reaction
(c) There may not be any harmful reaction

(d) There is no reaction at all in the blood

105. Rh factor develops in blood
(a) At the time of sexual maturity
(b) At 20 years of age
(c) At 30 years of age
(d) Right from birth since it is inherited from parents

106. The process of fertilization involves
1. Acrosome reaction
2. Activation of ovum
3. Capacitation
4. Amphimixis

The correct sequence of these steps is
(a) 1, 3, 2 and 4 (b) 1, 2, 3 and 4
(c) 4, 3, 1 and 2 (d) 2, 3, 4 and 1

107. The process of transformation of Spermatids into sperms is called
(a) Spermatogenesis
(b) Spermatolysis
(c) Spermatogenesis
(d) Spermatoneogenesis

108. Higher concentration of CO_2 in circulatory blood
(a) Accelerates the heartbeat
(b) Retards the heartbeat
(c) Stops the heartbeat
(d) Does not affect the heartbeat

109. One complete cardiac cycle in an adult takes about
(a) 0.08 second (b) 0.8 second
(c) 1.8 second (d) 18 seconds

110. The faster nerve impulse travels at
(a) 352 kmph (b) 532 kmph
(c) 300 kmph (d) 500 kmph

111. The formation of urea always takes place in
(a) Kidney (b) Liver
(c) Pancreas (d) Spleen

112. Urea is produced from an amino acid is known as
(a) Lucien (b) Arginine
(c) Glycine (d) Valine

113. The antidiuretic hormone (ADH), which regulates the amount of water excreted in urine, is produced by
(a) Kidney (b) Thyroid gland
(c) Pituitary gland (d) Adrenal gland

114. The part of kidney that prevents the loss of water through urine is
(a) Henle's loop (b) Glomerulus
(c) Bowman's capsule
(d) Collecting tubules

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115. In man, the pressure in the glomerulus is about
(a) 50 mm Hg (b) 60 mm Hg
(c) 70 mm Hg (d) 90 mm Hg

116. Osmotic pressure of the body is regulated by
(a) Magnesium (b) Sodium
(c) Iodine (d) Iron

117. The most abundant muscle protein is
(a) Actin (b) Troponin
(c) Myosin (d) Tropomyosin

118. The highest conductibility is shown by
(a) Smooth muscles
(b) Striated muscles
(c) Cardiac muscles
(d) Both (a) and (c)

119. Pituitary gland is located at the base of
(a) Kidney (b) Liver
(c) Brain (d) Pancreas

120. Regular conduction of nerve impulses requires a continuous supply of
(a) Nitrogen (b) Carbon dioxide
(c) Oxygen (d) Water

121. Cerebral cortex is also called
(a) Meninges (b) Neurilemma
(c) Grey matter (d) White matter

122. Which of the following glands is known as the 'master gland'?
(a) Thyroid gland (b) Parathyroid gland
(c) Pituitary gland
(d) Liver

123. The special chemical substances released by endocrine glands are called
(a) Enzymes (b) Hormones
(c) Alkaloids (d) Proteins

124. The neurons which carry nerve impulses from periphery of the body to the central nervous system are known as
(a) Internuncial neurons
(b) Neuronsecretory neurons
(c) Afferent neurons
(d) Efferent neurons

ANSWERS

1.	b	2.	b	3.	a	4.	a	5.	d	6.	a	7.	c	8.	b
9.	b	10.	d	11.	b	12.	b	13.	a	14.	d	15.	a	16.	c
17.	d	18.	c	19.	b	20.	c	21.	b	22.	b	23.	c	24.	d
25.	d	26.	a	27.	c	28.	c	29.	d	30.	c	31.	a	32.	b
33.	b	34.	c	35.	b	36.	a	37.	d	38.	c	39.	c	40.	a
41.	d	42.	b	43.	b	44.	b	45.	b	46.	c	47.	b	48.	b
49.	d	50.	b	51.	c	52.	b	53.	d	54.	d	55.	a	56.	d
57.	a	58.	c	59.	d	60.	c	61.	d	62.	d	63.	b	64.	c
65.	a	66.	c	67.	b	68.	d	69.	a	70.	a	71.	d	72.	d
73.	b	74.	b	75.	c	76.	a	77.	d	78.	b	79.	a	80.	c
81.	b	82.	b	83.	a	84.	d	85.	c	86.	b	87.	d	88.	b
89.	c	90.	c	91.	b	92.	d	93.	c	94.	c	95.	b	96.	a
97.	d	98.	b	99.	b	100.	a	101.	a	102.	a	103.	a	104.	c
105.	d	106.	b	107.	c	108.	a	109.	b	110.	b	111.	a	112.	c
113.	c	114.	a	115.	c	116.	b	117.	c	118.	b	119.	c	120.	c
121.	c	122.	c	123.	b	124.	c								

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DISEASES

1. Disease beri beri is because of
(a) Lack of green vegetables in diet
(b) Use of milled rice
(c) Deficiency of calcium in bones
(d) Poor use of citrus fruits

2. A hereditary disease in which the affected person is unable to use glucose in its body metabolism is
(a) Sickle cell anaemia
(b) AIDS
(c) Diabetes mellitus
(d) Haemophilia

3. Cataract is a disease which is due to
(a) A defect in the optic nerve
(b) Inflammation in the eye
(c) Opacity of cornea
(d) Opacity of lens

4. Which of the following female mosquito is the cause of Dengue fever?
(a) Aedes Aegypteis (b) Anophilies
(c) Barinohils (d) None of these

5. Hepatitis is a disease of which of the following organ?
(a) Heart (b) Liver
(c) Lungs (d) Brain

6. Primarily, which one of the following systems of the body is attacked by the HIV?
(a) Cardiovascular (b) Immune
(c) Respiratory (d) Reproductive

7. What type of infection is tuberculosis?
(a) Viral (b) Bacterial
(c) Fungal (d) Parasitic

8. Which vitamin's deficiency in the human body causes scurvy?
(a) Vitamin A (b) Vitamin C
(c) Vitamin E (d) Vitamin K

9. What is the disease partussis commonly known as?
(a) Poliomyelitis (b) Whooping cough
(c) Cholera (d) Hepatitis

10. The decreased secretion of insulin causes
(a) Beri beri (b) Rickets
(c) Anemia (d) Diabetes

11. AIDS virus destroys the ______ system of the human body.
(a) Circulation (b) Immune
(c) Digestion (d) Brain

12. The AIDS virus is called.
(a) A.I.B (b) B.I.H
(c) H.I.V (d) V.I.H

13. When AIDS is diagnosed the patient may live for about
(a) Ten years (b) Seven years
(c) Five years (d) Two years

14. Iron deficiency causes
(a) Bone deformity (b) Irregular heart beat
(c) Tooth decary (d) Anaemia

15. Doctors advise that excess intake of tomatoes, eggs, milk, cabbage, etc. should be avoided in case of persons with kidney stones, bladder stones, etc. to prevent the formation of crystals of
(a) Calcium phosphate
(b) Calcium oxalate
(c) Calcium chloride
(d) Calcium sulphate

16. Which of the following is *not* caused by bacteria?
(a) Tetanus (b) Whooping Cough
(c) Pneumonia (d) Rabies

17. Which of the following is caused by bacterial infection?
(a) Malaria (b) Tetanus
(c) Cancer (d) Rabies

18. Which of the following diseases induces immunity?
(a) Smallpox (b) Jaundice
(c) Diabetes (d) Tuberculosis

19. "Parkinson" is a disease of:
(a) Brain (b) Heart
(c) Lungs (d) Bones

20. Acquired Immuno Deficiency Syndrome (AIDS) is caused by
(a) Protozoa (b) Virus
(c) Fungus (d) Bacteria

21. ECG is used for the diagnosis of ailment of the
(a) Brain (b) Heart
(c) Kidneys (d) Lungs

22. Haemophilia means failure of the
(a) Heart to contract (b) Kidney to filter
(c) Blood to clot (d) Stomach to digest

23. Consider the following diseases:
1. Pellagra 2. Albinism
3. Cirrhosis 4. Beriberi

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Which of these are nutritional deficiency diseases?
(a) 1, 2, 3 and 4 (b) 2 and 3
(c) 1 and 4 (d) 1 and 3

24. AIDS virus has
(a) Single-stranded RNA
(b) Double-stranded RNA
(c) Single-stranded DNA
(d) Double-stranded DNA

25. Deficiency diseases are caused due to the deficiency of
(a) Proteins (b) Vitamins
(c) Carbohydrates (d) Fats

26. BCG vaccine is used to produce immunity against
(a) Whooping cough (b) Tubreculosis
(c) Virus fever (d) Smallpox

27. Goitre is associated with
(a) Thyroid glands (b) Pituitary glands
(c) Para-thyroid glands (d) Thymus glands

28. Which of the following is not a contagious disease?
(a) Measles (b) Hysteria
(c) Typhoid (d) Influenza

29. The Bacteriophages are
(a) Virus that attacks bacteria
(b) Virus that attacks insect
(c) Bacteria that attacks plant
(d) Bacteria that attacks insect

30. The phathogen causing the disease 'AIDS' is a
(a) Virus (b) Bacterium
(c) Protozoan (d) Fungus

31. Cylindrical glasses are advised to a patient suffering from
(a) Hypermetropia (b) Myopia
(c) Astigmatism (d) Night blindness

32. Myopia is a defect of vision, blurring(PMS 2006)
(a) Close objects
(b) Distant objects
(c) Coloured objects
(d) Identification of objects in dim light
(e) None of these

33. Meaningitis is a disease of human beings that affects
(a) Kidney
(b) Heart
(c) Liver
(d) Central Nervous system

34. Which one of the following diseases is genetically linked?
(a) Epilepsy (b) AIDS
(c) Colour blindness (d) Leucoderma

35. Which of the following diseases is caused by virus?
(a) Smallpox (b) Thyroid
(c) Sleeping sickness (d) Diphtheria

36. Diabetes is a disease in which the urine lacks
(a) Pencillin (b) Streptomycin
(c) Thyroxin (d) Insulin

37. Jaundice affects the
(a) Lungs (b) Liver
(c) Kidneys (d) Heart

38. The improper function of which of the following results in condition 'Myxedema' in human beings?
(a) Adrenal gland (b) Pancreas
(c) Liver (d) Thyroid gland

39. Match the following:

	Disease	Organism
A.	Cholera	1. Bacterium
B.	Mumps	2. Fungus
C.	Ringworm	3. Protozoa
D.	Sleeping sickeness	4. Virus

	A	B	C	D
(a)	1	4	2	3
(b)	1	2	4	3
(c)	3	4	2	1
(d)	3	2	4	1

40. Which of the following combinations are incorrect?
1. Asthma - Lung
2. Influenza - Respiratory tract
3. Rickets - Pancreas
4. Malaria - Spleen
(a) 1 and 2 (b) 1 and 3
(c) 2 and 4 (d) 3 and 4

41. Which of the following diseases is hereditary?
(a) Dysentery (b) Tuberculosis
(c) Haemophilia (d) Cancer

42. Which one of the following sets is correctly matched?
(a) Diphtheria, Pneumonia and Leprosy : Hereditary
(b) AIDS, Syphilis and Gonorrhoea: Bacterial
(c) Colour blindness, Haemophilia and Sickle cell anaemia : Sex linked
(d) Polio, Japanese B ancephalitis and Plague : Viral

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43. Which of the following symptoms are most likely to be observed in a person suffering from scurvy?
1. Swelling and bleeding of gums
2. Dry and scaly skin
3. Decreased resistance to cold
4. Soreness of mouth
(a) 1 and 3 (b) 2 and 4
(c) 1, 3 and 4 (d) 1, 2 and 3

44. Which one of the following is the correct group of diseases exclusively caused by virus?
(a) Measles, syphilis, rabies, cholera
(b) Poliomyelitis, syphilis, chicken pox, mumps
(c) Cholera, tuberculosis, meningitis, syphilis
(d) Measles, small pox, mumps, rabies

45. Which of the following diseases is caused by the bite of a mad dog?
(a) Hydrocele (b) Hydrophobia
(c) Hydrocephatus (d) Hydroperitoneum

46. Which of the following is skin disease?
(a) Anaemia (b) Pellagra
(c) Osteomalacia (D) Rickets

47. Match the following:

A.	Typhoid	1.	Bacteria
B.	Malaria	2.	Virus
C.	AIDS	3.	Protozoa
D.	Ringworm	4.	Worms
		5.	Fungi

	A	B	C	D		A	B	C	D
(a)	2	3	5	2	(b)	1	3	2	5
(c)	3	1	2	4	(d)	1	2	3	4

48. A person having obesity is more likely to suffer from which of the following diseases?
1. Hypertension 2. Diabetes
3. Coronary attack
(a) 1 and 2 (b) 2 and 3
(c) 1 and 3 (d) 1, 2 and 3

49. Match the following:

A.	Air-borne	1.	Tetanus
B.	Water-borne	2.	Tuberculosis
C.	Contact	3.	Cholera
D.	Wound	4.	Syphilis

	A	B	C	D		A	B	C	D
(a)	4	3	2	1	(b)	3	2	4	1
(c)	2	3	4	1	(d)	2	3	1	4

50. Three communicable diseases prevalent in developing countries caused by unsafe drinking water and bad sanitation are:
(a) Malaria, acute diarrhoea and schistosomiasis
(b) Rheumatism, malaria and AIDS
(c) Acute diarrhoea, cancer and gout
(d) Onchocerciasis, leukemia and arthritis

51. Oncogene is responsible for:
(a) AIDS (b) Typhoid
(c) Malaria (d) Cancer

52. Which of the following statements about AIDS is correct?
(a) It does not affect women
(b) It generally affects the brain
(c) AIDS virus can vary its genetic code outwitting a vaccine
(d) All those infected by a blood transfusion get AIDS within five years

53. Which of the following diseases is inheritable?
(a) Leukaemia (b) Colour blindness
(c) Malignancy (d) Hepatitis

54. Which of the following is least infectious?
(a) Leprosy (b) Hepatitis
(c) Tuberculosis (d) Conjunctivitis

55. Which of the following is not a mosquito borne disease?
(a) Dengue fever (b) Malaria
(c) Sleeping sickness (d) Filariasis

56. Match the following

A.	Typhoid	1.	Metabolic disorder
B.	Measles	2.	Bacteria
C.	Malaria	3.	Virus
D.	Diabetes	4.	Protozoa

	A	B	C	D		A	B	C	D
(a)	2	3	4	1	(b)	1	2	3	4
(c)	3	2	4	1	(d)	4	3	2	1

57. Which of the following diseases is/are likely to spread in the entire community if a leaky septic tank contaminates the water supply?
1. Cholera 2. Typhoid
3. Tuberculosis 4. Leprosy
(a) 1 only (b) 1 and 2
(c) 1, 2 and 4 (d) 2, 3 and 4

58. A girl ate sweets while fanning the flies away. Due to this, she suffered from a disease diagnosed as:
(a) Kwashiorkar (b) Tuberculosis
(c) Diphtheria (d) Cholera

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59. The virus of AIDS affects the growth of:
(a) Haemoglobin (b) RBCs in blood
(c) T cells in blood (d) Grey cells in brain

60. Cirrhosis is a disease that affects:
(a) Heart (b) Liver
(c) Brain (d) Lungs

61. Which of the following statements is true with respect to Leukaemia:
(a) Number of RBCs increases in blood
(b) Number of WBCs increases in blood
(c) Number of both RBCs and WBCs decreases in blood
(d) Number of WBCs decreases in blood

62. Which of the following are affected by AIDS?
1. Blood circulatory system
2. Nervous system
3. Immune system
4. Respiratory system
(a) 1, 2 and 3 (b) 2, 3 and 4
(c) 1, 2 and 4 (d) 1, 3 and 4

63. Alzheimer's disease in human beings is characterised by the degeneration of:
(a) Kidney cells (b) Nerve cells
(c) Brain cells (d) Liver cells

64. A round worm that enters man's body through the soles of the feet is:
(a) Leech (b) Hookworm
(c) Tapeworm (d) Trichina

65. In which of the following diseases do the germs enter through open wounds?
(a) Malaria (b) Tuberculosis
(c) Typhoid (d) Tetanus

66. Diabetes is caused due to the malfunctioning of:
(a) Liver (b) Kidneys
(c) Pancreas (d) Spleen

67. Which of the following diseases usually spreads through milk?
(a) Tuberculosis (b) Jaundice
(c) Diphtheria (d) Cholera

68. Which of the following diseases is/are sexually transmitted?
1. Syphilis 2. Gonorrhoea
3. AIDS
(a) 1 and 3 (b) 2 and 3
(c) 3 only (d) 1, 2 and 3

69. Urine of a diabetes patient contains more than average quality of which of the following?
(a) Sugar (b) Uric acid
(c) Urea (d) Albumin

70. A form of heart disease in which blood supply to the heart is inadequate is known as:
(a) Hepatitis (b) Alpoecia
(c) Angina (d) Pericarditis

71. Which of the following diseases is characterised by inflammation of the membranes covering the brain and spinal cord?
(a) Hepatits (b) Sinusitis
(c) Tonsilitis (d) Meningitis

72. Amnesia is related to:
(a) Sleeping sickness (b) Loss of sight
(c) Loss of hearing (d) Loss of memory

73. Match the following:

Defects of eye	Methods of rectification
A. Long sightedness	1. Concave lens
B. Short sightedness	2. Convex lens
C. Astigmatism	3. Cylindrical lens
D. Colour blindness	4. Plane glass
	5. Cannot be rectified

	A	B	C	D
(a)	1	4	3	5
(b)	2	1	3	5
(c)	2	5	1	4
(d)	4	1	5	3

74. Dialysis is used for the treatment of
(a) Kidney failure (b) Heart weakness
(c) Brain diseases (d) None of these

75. Heart attack is caused due to
(a) Blood sugar (b) Cholesterol
(c) Blood protein (d) Blood urea

76. Malaria is a disease which affects the
(a) Heart (b) Lungs
(c) Spleen (d) Kidney

77. Meningitis is caused by
(a) Fungi (b) Salmonella
(c) Meningococcus (d) Virus menin

78. Which of the following diseases is caused by virus?
(a) Smallpox (b) Tuberculosis
(c) Malaria (d) Cholera

79. In human beings infection of plasmodium causes
(a) Tetanus (b) Malaria
(c) Influenza (d) Typhoid

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80. Which of the following is not a contagious disease?
(a) Typhoid (b) Hysteria
(c) Measles (d) Influenza

81. Leukemia is a disease of the
(a) Lungs (b) Blood
(c) Skin (d) Nerves

82. The disease Elephantiasis is caused by
(a) Housefly
(b) Culex mosquito
(c) Anopheles mosquito
(d) Lack of vitamin B

83. Short-sightedness can be corrected by
(a) Convex lens
(b) Concave lens
(c) Convex-concave lens
(d) Concave-convex lens

84. Deficiency of iron in human diet causes ______
(a) Goitre (b) Scurvy
(c) Anaemia (d) Rickets

85. Trachoma is a disease of the
(a) Liver (b) Eyes
(c) Lungs (d) Kidneys

86. Mumps is a disease caused by
(a) Fungus (b) Bacterium
(c) Virus (d) None of these

87. Rickets is a disease of the
(a) Bones (b) Tissue
(c) Muscles (d) Blood

88. Which of the following diseases has posed a serious threat the world over?
(a) Tumour (b) Paralytic stroke
(c) AIDS (d) Tuberculosis

89. Which of the following disease is not water-borne?
(a) Cholera (b) Influenza
(c) Amoebiasis (d) Typhoid

90. Night blindness is caused by lack of which vitamin? (PMS 2006)
(a) Vitamin A (b) Vitamin B
(c) Vitamin C (d) Vitamin D

91. Autopsy is connected with
(a) Post-mortem (b) Study of living cells
(c) Cancer (d) None of these

92. Typhoid and cholera are typical examples of
(a) Infection diseases
(b) Air-borne diseases
(c) Water-borne diseases
(d) None of these

93. Which two organs glands are affected by malaria?
(a) Lungs and heart (b) Spleen and liver
(c) Kidneys and lungs (d) Heart and brain

94. Pyorrhoea is a disease of the
(a) Nose (b) Gums
(c) Heart (d) Lungs

95. The disease in which bronchial tubes become narrow due to spasms of bronchial muscles is called
(a) Influenza (b) Asthma
(c) Diphtheria (d) None of these

96. Which of the following medicines is administered to patients suffering from diabetes?
(a) Penicillin (b) Insulin
(c) Sulpha drugs (d) Streptomycin

97. Which of the following diseases occur due to consumption of contaminated water?
(a) Cholera (b) Influenza
(c) Malaria (d) Tuberculosis

98. Lock Jaw, i.e., difficulty in opening the mouth is a symptom of
(a) Plague (b) Tetanus
(c) Cholera (d) None of these

99. Virus causes
(a) Cholera (b) Typhus
(c) Typhoid (d) Scurvy

100. Which of the following pairs is incorrect?
(a) Plague: Rat (b) Rabies: Dog
(c) Tapeworm: Pig
(d) Poliomyelitis: Monkey

101. A person suffering from Beri-Beri should take
(a) Unpolished rice, green vegetables, yeast
(b) Egg yolk, fish, green vegetables
(c) Citrus fruit, mangoes, grapes
(d) Sweet potato, meat and milk

102. Which of the following is a fungal disease?
(a) Ringworm (b) Leucoderma
(c) Elephantiasis
(d) None of these

103. Bronchitis is a disease of which of the following organs?
(a) Blood (b) Bladder
(c) Liver (d) Respiratory tract

104. Acquired Immuno-Deficiency Syndrome (AIDS) is caused by
(a) Bacterium (b) Protozoan
(c) Fungus (d) Virus

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105. How hepatitis is transmitted to different persons?
(a) Mosquito bite (b) Swine
(c) Birds (d) Water

106. The disease malaria effects which part of the body?
(a) Kidney (b) Liver
(c) Lungs (d) Spleen

107. The disease Myopia is connected with
(a) Teeth (b) Eye
(c) Joints (d) Ear

108. Trachoma is a disease of
(a) Ear (b) Eye
(c) Joints (d) Teeth

109. Give a typical example of water born disease.
(a) Malaria (b) Cholera
(c) Typhoid (d) Influenza

110. Name the vaccine that protects against tuberculosis?
(a) BCG – Bacillus Chalmette Guerin
(b) Varivax - Varicella Zoster
(c) Q - Vax
(d) IPV - Imovax

111. Name the disease in which the air sacs in lungs are filled with pus.
(a) Typhoid (b) Malaria
(c) Hepatitis (d) Pneumonia

112. A clouding that develops in the lens of the eye or in its envelope obstructing the passage of light is known as
(a) Diphtheria (b) Cataract
(c) Hemophilia (d) Glaucoma

113. Hepatitis and jaundice are the diseases of
(a) Kidney (b) Spleen
(c) Liver (d) Lungs

114. Parkinson is a disease of
(a) Eye (b) Lungs
(c) Brain (d) Bones

115. Novel H_1N_1 is often referred to as
(a) Bird flu (b) Swine flu
(c) Aids (d) Cancer

116. Influenza a virus, subtype H_5N_1 is also known as
(a) Swine flu (b) Bird flu
(c) Pengue (d) Measks

117. Which of the following female mosquito is the cause of Dengue?
(a) Aides Aegyptus (b) Anopheles
(c) Barinohils (d) Propheles

Answers

1.	b	2.	c	3.	c	4.	a	5.	b	6.	b	7.	b	8.	b
9.	b	10.	d	11.	b	12.	c	13.	d	14.	d	15.	b	16.	d
17.	b	18.	a	19.	a	20.	b	21.	b	22.	c	23.	c	24.	a
25.	b	26.	b	27.	a	28.	b	29.	a	30.	a	31.	c	32.	b
33.	d	34.	c	35.	a	36.	d	37.	b	38.	d	39.	a	40.	d
41.	c	42.	c	43.	a	44.	d	45.	b	46.	b	47.	b	48.	d
49.	c	50.	a	51.	d	52.	c	53.	b	54.	a	55.	c	56.	a
57.	b	58.	d	59.	c	60.	b	61.	b	62.	d	63.	b	64.	b
65.	d	66.	c	67.	a	68.	d	69.	a	70.	c	71.	d	72.	d
73.	b	74.	a	75.	b	76.	c	77.	c	78.	a	79.	b	80.	b
81.	b	82.	b	83.	b	84.	c	85.	b	86.	c	87.	a	88.	c
89.	b	90.	a	91.	a	92.	c	93.	b	94.	b	95.	b	96.	b
97.	a	98.	b	99.	b	100.	d	101.	d	102.	a	103.	d	104.	d
105.	d	106.	d	107.	b	108.	b	109.	c	110.	a	111.	d	112.	b
113.	c	114.	c	115.	b	116.	b	117.	a						

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Chapter 3

ENVIRONMENTAL SCIENCE (MCQs)

1. Green plants provide food for other
A. plants B. living things
C. non-living things D. trees

2. Fluoride is also added to water, which helps prevent
A. infections B. sickness
C. fever D. tooth decay

3. Tanks that supply water to towns are built at
A. roofs of buildings B. tall water towers
C. town level D. high lands

4. Polar ice caps are formed in
A. East and West B. East and North
C. North and South D. West and South

5. Oil can poison
A. water B. aquatic life
C. plants D. humans

6. Largest of all oceans on earth is
A. Pacific B. Atlantic
C. Antarctic D. Arctic

7. Desalination plant is very expensive because it
A. uses a large amount of fuel
B. is built on mountains and high lands
C. uses electric machinery for desalination
D. is built with expensive materials

8. When algae grows on water surface, it prevents
A. access of bacteria in water
B. access of Sunlight in water
C. growth of fungi
D. growth of ferns and mosses

9. Percentage of salty water is
A. 80% B. 90% C. 95% D. 97%

10. As compared to using a hose to wash car, water bucket uses
A. less water B. more water
C. equal water
D. maybe less water or more

11. Poison gets more concentrated as it moves through
A. water B. food chain
C. fish body
D. vascular bundles in aquatic plants

12. Percentage water in our body is
A. 50% B. 60%
C. 70% D. 90%

13. Addition of small doses of chlorine gas into filtered water is known as
A. Coagulation B. Sedimentation
C. Filtration D. Chlorination

14. Skin diseases, eye infections and diarrhea are examples of
A. Water-borne diseases
B. Water-washed diseases
C. Water-related diseases
D. Anti-water diseases

15. Water is passed through filter beds of sand and gravel to remove smaller particles of dust, it is called
A. Coagulation B. Sedimentation
C. Filtration D. Chlorination

16. Sea which joins with ocean is
A. Arabian sea B. Mediterranean sea
C. Red sea D. Black sea

17. Water of oceans and seas is
A. Sour B. Bitter
C. Sweet D. Salty

18. Average depth of largest ocean is
A. 1000 meters B. 2000 meters
C. 3000 meters D. 4000 meters

19. Water can be kept clean if we
A. Litter in the trash
B. Egest near a stream
C. Litter near a pond
D. Pour waste oil in rivers

20. Fish in ponds and lakes die, because algae
A. Takes all the minerals from water
B. Takes all the oxygen of water
C. Prevents Sunlight to enter water
D. Prevent aquatic life from respiring

21. Huge strainers are used to
A. Force water to the treatment plant
B. Increase the water pressure
C. Filter large particles in the water
D. Filter bacteria and other harmful organisms Ans.

22. Compared to boiling point of water, pesticides and insecticides have
A. higher boiling point
B. lower boiling point

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C. equal boiling points
D. extremely high boiling point

23. Water we use comes from
A. rain and ice B. rain and sea
C. oceans and rivers D. ponds and lakes

24. Pesticides make river water
A. poisonous B. Stale
C. stagnant D. hot

25. Most of reservoirs are built on
A. deserts B. lowlands
C. mountains and high lands
D. sea beds

26. Concentration of oxygen in hot water as compared to normal water is
A. low B. high
C. same D. maybe low or high

27. When people do not have enough water for washing hands and rest of their body, a disease is spread. This disease is known as
A. Water-borne diseases
B. Water-washed diseases
C. Water-related diseases
D. Anti-water diseases

28. Maximum percentage of water in a plant body or animals body yet found is
A. 99% B. 75%
C. 80% D. 50%

29. Largest use of desalinated and distilled water is in
A. North America B. South America
C. Middle East D. East Asia

30. In best water treatment works, water is pumped from
A. lakes B. rivers
C. oceans D. reservoirs

31. Wastage of food is a big waste of
A. meat B. vegetables
C. grains D. water

32. Disease formed due to drinking of water containing bacteria and viruses is known as
A. Water-borne diseases
B. Water-washed diseases
C. Water-related diseases
D. Anti-water diseases

33. Soil and sand sinks to bottom in
A. Metal screen B. Grit tank
C. Sludge tank D. Filter bed

34. Crops grow well when they are
A. fertilized B. irrigated
C. cared D. wilted

35. If we don't drink water, we will eventually
A. get dry B. get wet
C. die D. get hydrated

36. Largest ocean covers about
A. half of the earth's surface
B. quarter of the earth's surface
C. one-third of the earth's surface
D. one-fifth of the earth's surface

37. Scientists believe that eight out of ten people in under-developed countries have diseases due to
A. Polluted water B. Bacterial food
C. Infectious food D. Salty water

38. Trachoma is caused due to presence of
A. insects B. bacteria
C. viruses D. parasites

39. In snowy regions, most of fresh water is
A. under snow B. under ice
C. in the form of snow
D. in the form of ice

40. Untreated sewage is pumped into
A. water tanks B. storage tanks
C. river and streams D. oceans

41. Water areas smaller than oceans are known as
A. lakes B. ponds
C. seas D. rivers

42. For desalination plant, first priority is
A. reserves of natural gas
B. reserves of water
C. reserves of oil
D. reserves of coal

43. Whether we obtain water from tap or well, it originally came from
A. sea B. ocean
C. river D. rain

44. Distilled water
A. is suitable for drinking
B. is not suitable for drinking
C. can be poisonous
D. can be bitter in taste

45. In country area, untreated sewage is pumped into tanks known as
A. Septic tanks B. Sewage tanks
C. Grit tanks D. Sludge tanks

46. Settlement of particles at bottom of a tank and their removal is called
A. Coagulation B. Sedimentation
C. Filtration D. Chlorination

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47. Disease due to water-related disease is spread by
A. Bacteria
B. Viruses
C. Snails
D. Worms

48. Remaining sewage after it has passed through sludge tank is known as
A. Treated sewage
B. Effluent
C. Clinker
D. Distillate

49. Infected feces of humans contain
A. Bacteria
B. Viruses
C. Snails
D. Worms

50. In water cycle, Sun helps water to
A. get clean
B. refresh
C. evaporate
D. move in the direction of light

51. Ice flows down mountainside like a slow moving river, called a/an
A. Ice cap
B. Snow river
C. Glacier
D. Snow peak

52. To prevent excess use of water from taps and tanks, we can collect water from
A. rain
B. streams
C. rivers
D. sea

53. Unwanted substance of water may be harmful for
A. plants only
B. animals only
C. plants, animals and people
D. plants and people

54. Polio, hepatitis and typhoid are examples of
A. Water-borne diseases
B. Water-washed diseases
C. Water-related diseases
D. Anti-water diseases

55. In tanks containing untreated sewage, water is separated from solid waste by
A. sand
B. gravels
C. soil
D. special filters

56. Removal of salt from water at a large scale is known as
A. Water logging
B. Salivation
C. Desalination
D. Distillation

57. Alum is a compound of two elements that are
A. aluminum and nitrate
B. aluminum and sulfate
C. sodium and nitrate
D. sodium and sulfate

58. Most essential component for crops is
A. water
B. fertilizers
C. soil
D. humidity

59. If remained untreated, trachoma may cause
A. deep eye infection
B. eye injuries
C. blindness
D. dizziness

60. Largest sea on earth is
A. Arabian Sea
B. South China Sea
C. Mediterranean Sea
D. Dead sea

61. Other links instead of producer in a food chain are known as
A. consumers
B. scavengers
C. detritivores
D. decomposers

62. Small creatures that breakdown decays into further smaller pieces are called
A. Scavengers
B. Detritivores
C. Primary consumers
D. Primary producers

63. Two correct examples of a habitat are
A. Streams and caves
B. Ponds and desert
C. Water and air
D. Grass and den

64. White coat of polar bears help them to
A. camouflage
B. prevent cold
C. dry faster
D. stay healthy

65. To make sure that animals get enough of things they need to survive, they have to
A. compete
B. survive
C. reproduce
D. grow bigger

66. All food chains begin with
A. Primary consumer
B. Detritivores
C. Secondary consumer
D. Producers

67. Basic thing for survival is
A. food
B. water
C. shelter
D. reproduction

68. Polar bears have sharp claws and hairy soles of feet for
A. awesome grip
B. quick sprinting
C. prevent cracks on the surface of ice
D. climbing mountains easily

69. Energy absorbed by green plants is about
A. 20% of Sunlight
B. 30% of Sunlight
C. 40% of Sunlight
D. 50% of Sunlight

70. Animals that depend on each other for living are called
A. Dependent producers
B. Dependent consumers
C. Producers
D. Consumers

71. Carnivores are always
A. Producers
B. Primary consumers
C. Secondary consumers
D. Tertiary consumers

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72. Transfer of energy in a food chain is shown by
A. double arrow B. inverse arrow
C. straight arrow D. curved arrow

73. Flow of energy from producers to consumers forms a
A. food ring B. food chain
C. food tie D. food transfer

74. In skin, to keep itself warm it has
A. pieces of blankets
B. insulated wool layer
C. insulated fat layer
D. insulated protein layer

75. Some insects hibernate while some young insects spend winter as
A. larva B. pupae
C. egg D. shells

76. Animals which depend on producers are known as
A. Producers B. Primary consumers
C. Secondary consumers
D. Tertiary consumers

77. Some predators come at night such as
A. Bears B. antelopes
C. Owls D. Eagles

78. To make food, plants need
A. oxygen and water
B. oxygen and glucose
C. carbon dioxide and glucose
D. carbon dioxide and water

79. Main energy source for food chain is
A. Producers B. Soil
C. Fertilizers D. Sun

80. Right sequence of a food chain is
A. grass, cheetah, rabbit
B. rabbit, grass, cheetah
C. cheetah, rabbit, grass
D. grass, rabbit, cheetah

81. Herbivores are always
A. Producers B. Primary consumers
C. Secondary consumers
D. Tertiary consumers

82. Swollen stems of cactus are important to
A. absorb more oxygen
B. absorb more carbon dioxide
C. absorb more water
D. absorb more Sunlight

83. Small surface area of plant reduces
A. water loss B. Sunlight absorption
C. predator attraction
D. birds' chances to build nest

84. To dig soil, moles have
A. huge and sharp teeth
B. short feet but sharp claws
C. extra-large feet and sharp claws
D. small but sharp teeth

85. An example of habitat is
A. Pond B. Air
C. Oxygen D. Moon

86. Shape of moles is
A. flat B. streamlined
C. curved D. bi-muscular

87. Fishes have gills to absorb
A. water B. carbon dioxide
C. aquatic plant waste D. oxygen

88. Plants can make their own food, so they are called
A. Primary consumer
B. Secondary consumers
C. Producers D. Heterotrophs

89. To find water, cactus plants have
A. thick roots B. hairy roots
C. long roots D. thick shoots

90. Body of a fish is
A. flat B. streamlined
C. curved D. bi-muscular

91. Humus can also be used by plants as
A. oxygen gas
B. carbon dioxide gas C. fertilizers
D. protective layer

92. Birds and animals that feed on dead decaying organisms are called
A. Scavengers B. Detritivores
C. Primary consumers D. Primary producers

93. A place where organisms can take shelter and reproduce is known as
A. Ecosystem B. Habitat
C. Community D. Population

94. Animals which depend on primary consumers are known as
A. Producers B. Primary consumers
C. Secondary consumers
D. Tertiary consumers

95. Polar bears have thick fur so that they can
A. camouflage
B. keep themselves warm
C. dry faster
D. stay alive and healthy

96. To keep fish floating in water, it has

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A. fins B. tail
C. swim bladder D. feathers

97. To swim through water easily, fish has
A. feathers B. wings
C. propellers D. fins

98. A collection of multiple food chains is known as
A. food connection B. food web
C. food tie D. food cover

99. Fish have mucus on their overlapping scales to
A. prevent predators from catching them
B. slide through water
C. absorb oxygen
D. release carbon dioxide

100. Due to scarce supply of food, animals ________ in winter.
A. sleep B. die
C. hibernate D. migrate

101. To adopt ways of nature for survival is known as
A. Adaptation B. Survivalism
C. Adoptation D. Survival

102. Most flowers open in daylight so that
A. insects can pollinate them
B. they can absorb Sunlight
C. they can transpire quickly
D. wind can pollinate them

103. Polar animals live in
A. forests B. caves
C. arctic D. water

104. Many animals in desert hide in day to prevent
A. predators B. heat
C. rain D. cold

105. Food chains and webs always start with a
A. Consumer B. Detritivore
C. Scavenger D. Green Plant

106. Moles feed on
A. roundworms B. earthworms
C. mice D. birds

107. Leaves of cactus are like small spines to
A. prevent excess water loss by evaporation
B. prevent predators from eating
C. prevent excess Sunlight to be absorbed
D. prevent birds to build nest

108. When plants and animals die, they are decomposed by
A. Scavengers B. Detritivores
C. Primary consumers
D. Primary producers

109. Fur of moles is
A. short and velvety B. hard
C. smooth but sticky D. spikey

110. Bears have strong legs so that they can
A. walk long distances in search for food
B. climb mountains
C. take down preys D. swim easily

111. Factors which surrounds an organism affecting its growth, development and survival make up the
A. diversity B. biodiversity
C. environment D. culture

112. PH in soil affects the
A. plants B. animals
C. birds D. humans

113. Animal which is famous for being master of disguise is
A. chameleon B. scarlet snake
C. viceroy butterfly D. bald eagle

114. In a habitat organism
A. live B. reproduce
C. both a and b D. hunt

115. Animals with in same specie compete with one another for
A. mates B. territories
C. both a and b D. food

116. Birds have adapted behavior to seasonal changes and extreme weather called
A. transpiration B. shedding of leaves
C. hibernating D. migration

117. Animals which hunt down other animals are called
A. predator B. prey
C. scavenger D. wild animal

118. A system formation when different communities interact with each other and their a biotic environment is called an
A. ecosystem B. solar system
C. organism system D. complex system

119. Organism which live in hydrothermal vents in Pacific ocean includes
A. Pompeii worms B. earthworms
C. centipede D. millipede

120. Rocks are made up of
A. soil B. core
C mantle D. crust

121. Water in freezing form may break rocks in to pieces by force of

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A. reduction
B. evaporation
C. expansion
D. condensation

122. With passage of time transported sediments become
A. smoother
B. smaller
C. rounder
D. all of them

123. Dead remains of animals and plants also accumulate to form
A. coal
B. natural oil
C. diamond
D. sedimentary layer

124. Weathering of rocks is affected by
A. rain
B. temperature
C. both a and b
D. erosion

125. Sedimentary layers over a period of time are compacted and cemented to form
A. sedimentary rocks
B. mountains
C. deserts
D. hills

126. While transportation sediments are sorted according to their
A. size
B. volume
C. color
D. chemical properties

127. Repetition in expansion and contractions in rocks give rise to
A. stress
B. heat
C. volume
D. force

128. Granite chip on exposure to extreme temperature will be
A. broken
B. stronger
C. weaker
D. stable

129. Colorado river moving through layers of sandstone, shale and limestone after million years have formed
A. statues
B. canyon
C. pyramid
D. wall of China

130. Measure of empty spaces in a material is called its
A. volume
B. surface area
C. porosity
D. elasticity

131. Process of wearing down of Earth's surface and altering into landforms is called
A. erosion
B. weathering
C. land sliding
D. earth quake

132. Sedimentary rocks includes
A. shale
B. sandstone
C. conglomerate
D. all of them

133. Chemical or physical process by which rock exposed to weather undergo changes in character and breakdown is called
A. erosion
B. weathering
C. land sliding
D. earth quake

134. Hazard of mountain climbing is
A. weathering
B. snow fall
C. rock falls
D. erosion

135. Different appearance of each layer is due to different type of
A. sediments
B. minerals
C. rain water
D. weathering

136. Water expands on
A. room temperature
B. boiling
C. freezing
D. flowing

137. Weathering and erosion both alter its
A. shape
B. size
C. volume
D. landforms

138. Top of mountains at night time are
A. hot
B. cold
C. mild
D. temperate

139. Carbon dioxide which is present in air produces weak acid in rain called
A. carbonic acid
B. sulphuric acid
C. acetic acid
D. oxalic acid

140. Sediments are particles of
A. clay and sand
B. minerals
C. rock fragments
D. all of them

141. COVID-19 first broke out in
A. China
B. India
C. Spain
D. Italy

142. Acid and carbonates react together to form
A. oxygen
B. nitrogen
C. carbon dioxide
D. Sulphur dioxide

143. Acidic gas which makes air pollutants is
A. carbon dioxide
B. Sulphur dioxide
C. nitrogen
D. oxygen

144. A common sedimentary rock which is formed from plant material is
A. coal
B. natural oil
C. diamond
D. marble

145. Examples of rocks includes
A. granite
B. marble
C. sandstone
D. all of them

146. Dodo became extinct in
A. 1681
B. 1961
C. 1896
D. 1861

147. Smoke particles and harmful gases released in air produces a
A. smoke
B. haze
C. fog
D. smog

148. Environment can be kept clean and green by using
A. less energy
B. environment friendly technology

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C. protecting wildlife D. all of them

149. Fertilizers supports growth of
A. algae B. fruit plants
C. vines D. pines

150. If untreated waste water will be directly spill in to rivers, sea and lakes it may
A. contaminate B. polluted
C. spread diseases D. all of them

151. When forests are cleared on a very large scale by cutting or burning them down it is
A. forestation B. deforestation
C. plantation D. incantation

152. Global warming refers to
A. drastic changes in climate
B. everywhere will be hot climate
C. everywhere will be freezing
D. some warmer other colder

153. Sharks are hunted to create delicacy in Chinese cuisine by its
A. jaws B. fins
C. eyes D. tail

154. People should be banned to hunt in forest or collect wild plants to ensure protection of
A. wild life B. ecosystem
C. food chain D. food web

155. Demand for transport and production of goods have increased due to excessive
A. consumption B. wastage
C. recycling D. reducing

156. Algae grows on surface of water and hence becomes barrier for plants in water by blocking
A. sunlight B. heat
C. fresh water D. temperature

157. Technology can be used to harness renewable sources of
A. energy B. food
C. light D. heat

158. Many animals have become endangered species due to
A. over hunting B. over feeding
C. global warming D. forestation

159. Animal which is hunted for its glands which is used to make perfumes is
A. deer B. cat
C. antelope D. duck

160. During decomposition of buried waste explosion can occur due to production of gas
A. oxygen B. methane
C. carbon dioxide D. nitrogen

161. Harmful substances which damage environment are called
A. pollutants B. compounds
C. gases D. waste material

162. A cleared area from trees can require a time to grow again which is equal to
A. 1 year B. 20 years
C. 50 years D. 500 years

163. If ice on Polar Regions will melt away animals will lose their habitat like
A. polar bears B. seal
C. both a and b D. trout

164. If atmosphere is released with lots of pollutants it is
A. pollution B. forestation
C. deforestation D. habituation

165. Human being is able to satisfy his needs by changing
A. temperature B. environment
C. habitat D. region

166. Oil spill damage animal's
A. fur B. feathers
C. both a and b D. lungs

167. If ice on mountains will continue to melt levels in sea will
A. rise B. lower
C. be same D. reduce

168. Aquatic and marine birds get harmed when they come in contact with
A. oil spill B. salty water
C. big fish D. boats

169. Left waste material on land which is washed in to drains by rain is
A. litter B. oil
C. stones D. trees

170. Sewage water is dropped in ocean after treating in
A. hydro cells B. sewage treatment
C. turbine D. filtration

171. In China animal which is kept in reserve to save from being extinct is
A. panda B. ostrich
C. peacock D. dodo

172. Agricultural crops originate from wild species of plants in rainforests includes
A. coffee beans B. rice
C. both a and b D. tea

173. Reduce, reuse and recycle can conserve our
A. environment B. food
C. climate D. oxygen

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174. Pollutants in air are strong enough to turn rain water in to
A. chemical
B. acid rain
C. pure water
D. water droplets

175. Planting more trees to get back forest is
A. forestation
B. deforestation
C. reforestation
D. pollution

176. By conserving environment there could be achievement of
A. sustainable development
B. dynamic equilibrium in environment
C. maintained ecosystem
D. conserved energy resources

177. Calophyllum tree in Sarawak has ability to treat
A. blood cancer
B. AIDS
C. Hepatitis
D. polio

178. In incineration plants not recycled waste is
A. burned
B. filter
C. reduced
D. discharged

179. Island of Mauritius have a bird once called
A. dodo
B. duckbill
C. ostrich
D. hen

180. Introduction of foreign specie will upset dynamic equilibrium of
A. water
B. air
C. ecosystem
D. climate

181. Animal which were first hunted for food now being hunted for sport is
A. bison
B. tiger
C. camel
D. leopard

182. Buried waste contain
A. toxic chemicals
B. bacterial
C. both a and b
D. useful minerals

183. Rats, pigs and monkeys brought by human on island eaten eggs of
A. dodo
B. duckbill
C. ostrich
D. hen

184. A gas which is major gas in trapping heat and prevent it from escaping is
A. oxygen
B. ozone
C. carbon dioxide
D. nitrogen

185. Maintenance of oxygen and carbon dioxide in air is done by
A. forests
B. humans
C. animals
D. global warming

186. Over-exploitation includes excessive
A. energy usage
B. hunting
C. both a and b
D. plantation

187. Marine animals specially fish when live in factory discharged waste water tends to get poisonous for humans and can cause
A. death
B. diseases
C. both a and b
D. development

188. A global phenomenon involving warming of earth's climate is termed as
A. global warming
B. greenhouse effect
C. over-exploitation
D. pollution

189. Clearing forest can lead to washing away of soil called
A. erosion
B. landslides
C. weathering
D. all of them

190. Madagascar rosy periwinkle is used in treatment of
A. blood cancer
B. AIDS
C. Hepatitis
D. polio

191. Things which are thrown away after one use are called
A. disposables
B. recycle able
C. reduce able
D. reusable

192. Decomposers help in
A. breaking dead waste
B. recycle nutrients
C. both a and b
D. spreading decay

193. Detritus is eaten by
A. earthworm
B. millipede
C. both a and b
D. birds

194. A debris from rotting matter is called
A. detritus
B. dirt
C. waste material
D. fertilizer

195. A food chain starts with a
A. producer
B. consumers
C. decomposer
D. scavengers

196. Most important group of decomposers include
A. bacteria
B. fungi
C. both a and b
D. virus

197. A network of interconnected food chains is called
A. food web
B. web cycle
C. chain web
D. ecosystem

198. Plants → Caterpillar→birds is example of
A. food web
B. food chain
C. food cycle
D. ecosystem

199. Organisms which breakdown dead or waste matter in to simpler substances are termed as
A. producers
B. consumers

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C. decomposer
D. scavengers

200. A change in food web to any population have effect on
A. other population
B. abiotic factors
C. water
D. trees

201. Decay is breaking down or decomposition of
A. waste matter
B. birds
C. animals
D. fish

202. According to pyramid of numbers number of producer is greater than number of
A. herbivores
B. carnivores
C. omnivores
D. scavengers

203. Carnivores and omnivores are considered as
A. producers
B. consumers
C. primary consumers
D. secondary consumers

204. Rest of dead body left after consumers feed is
A. disappeared
B. decomposed
C. reacted
D. spread

205. Soft portion of carcass of a dead lion is feed for
A. vultures
B. hyenas
C. both a and b
D. crocodile

206. Producers, consumers and decomposers are dependent on each other for their
A. growth
B. reproduction
C. breathing
D. survival

207. Organisms which feed on secondary consumers are called
A. primary consumer
B. tertiary consumers
C. producers
D. decomposers

208. A series of organism through which energy is transferred in form of food is called
A. food web
B. food chain
C. food cycle
D. ecosystem

209. There occurs diminishing along food chain in amount of
A. energy
B. heat
C. food
D. temperature

210. Organisms which directly feed on producers are
A. primary consumer
B. secondary consumer
C. decomposer
D. carnivores

ANSWERS:

1	B	2	D	3	B	4	C	5	B	6	A	7	A	8	B	9	D	10	A
11	C	12	C	13	D	14	B	15	C	16	B	17	D	18	D	19	A	20	B
21	C	22	B	23	A	24	A	25	C	26	A	27	B	28	A	29	C	30	D
31	D	32	A	33	B	34	B	35	C	36	C	37	A	38	B	39	D	40	C
41	C	42	C	43	D	44	B	45	A	46	C	47	D	48	B	49	D	50	C
51	C	52	A	53	C	54	B	55	C	56	C	57	B	58	A	59	A	60	B
61	A	62	B	63	A	64	A	65	A	66	D	67	B	68	A	69	D	70	B
71	C	72	C	73	B	74	C	75	B	76	B	77	C	78	D	79	D	80	D
81	B	82	C	83	A	84	C	85	A	86	B	87	D	88	C	89	C	90	B
91	C	92	A	93	B	94	C	95	B	96	C	97	D	98	B	99	B	100	D
101	A	102	A	103	C	104	B	105	D	106	B	107	A	108	B	109	A	110	D
111	C	112	A	113	A	114	C	115	D	116	D	117	A	118	A	119	A	120	D
121	C	122	D	123	D	124	C	125	A	126	A	127	A	128	A	129	B	130	C
131	A	132	D	133	B	134	C	135	A	136	C	137	D	138	B	139	A	140	D
141	A	142	C	143	A	144	A	145	D	146	A	147	B	148	D	149	A	150	D
151	B	152	D	153	B	154	A	155	A	156	A	157	A	158	A	159	A	160	B
161	A	162	C	163	C	164	A	165	C	166	C	167	A	168	A	169	A	170	B
171	A	172	C	173	A	174	B	175	C	176	A	177	B	178	A	179	A	180	C
181	A	182	C	183	A	184	C	185	B	186	C	187	C	188	A	189	A	190	A
191	A	192	C	193	C	194	A	195	A	196	D	197	B	198	B	199	A	200	A
201	A	202	A	203	D	204	B	205	C	206	D	207	B	208	B	209	A	210	A

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Chapter 4

FOOD SCIENCE
MCQs

1. Name the nutrient which provides instant energy?
(a) Proteins (b) Carbohydrates
(c) Minerals (d) Vitamins

2. The micro-organism widely used in preparation of butter or cheese is
(a) Saccharomyces sp.
(b) Mycobacterium sp.
(c) Lactobacillus sp.
(d) None of these

3. Fats and their derivatives occurring in living systems are collectively known as
(a) Carbohydrates (b) Proteins
(c) Lipids (d) Vitamins

4. Fats are long chain organic compounds consisting of several different kinds of ——————
(a) Amino acids (b) Fatty acids
(c) Iodine (d) Accetic acid

5. What is the main function of water in human body
(a) Provide Energy (b) Help in growth
(c) Control body process
(d) All of the above

6. Which of the following minerals are very useful for human body?
(a) Calcium (b) Phosphorous
(c) Sodium (d) All of above

7. Name the ready source of energy available for athletes?
(a) Carbohydrates (b) Fats
(c) Minerals (d) Vitamins

8. Which of the following has been found useful in keeping cholesterol level down?
(a) Vitamin A (b) Tulsi
(c) Saliva (d) Cheese

9. Carrot is the rich source of:
(a) Vitamin A (b) Vitamin B
(c) Vitamin C (d) Vitamin D

10. How much protein is recommended for a moderately active woman daily?
(a) 30g (b) 35g
(c) 41g (d) 46g

11. Water is the largest inorganic component of human food. Name the largest organic component of human body?
(a) Protein (b) Fats
(c) Carbohydrates (d) Vitamins

12. What of the following is true regarding excess of Carbohydrates in human body?
(a) They are stored as glycogen or converted to fat
(b) They are stored in liver and muscle and in fat cells beneath the skin
(c) Both of these
(d) None of these

13. Select the correct statement?
(a) Fruits and vegetables are 80 to 95 percent water
(b) The human body is 65 percent water
(c) Meats are made up of 50 percent water
(d) All above

14. Which part of our food is responsible to build body tissue and to synthesize enzymes, some hormones such as enzymes, some hormones such as insulin that regulate communication among organs and cells, and other complex substances that govern body processes?
(a) Carbohydrates (b) Fats
(c) Protein (d) None of them

15. A deficiency of zinc:
(a) Impair growth (b) Cause dwarfism
(c) Both of them (d) None of them

16. In which part of our body Fluorine is retained?
(a) Teeth (b) Bones
(c) Both a and b (d) Not a nor b

17. Which of the following statement is correct?
(a) Milk is rich in vitamins but contains no iron.
(b) Pasteurized Milk has no vitamin C
(c) In adults, too much milk can cause unsaturated fatty acids to build in the blood system.
(d) All above

18. Mention the food in which Sodium, cobalt, chloride, copper, magnesium, manganese, phosphorus, and potassium are present?
(a) Milk (b) Pulses
(c) Vegetables (d) fruits

19. How many people worldwide suffer from iodine-deficiency diseases?
(a) 50 million (b) 10 million
(c) 150 million (d) 110 million

20. Copper, zinc, fluorine, chromium, molybdenum, and selenium are important parts of human food. By which name these are called?
(a) Micro elements (b) Trace elements

(c) Essential elements (d) Nano elements

21. The oil commonly used as an adulterant in cooking oil is
(a) Linseed oil (b) Sesame oil
(c) Argemone oil (d) all of the above

22. Into how many groups, nutrients can be divided?
(a) 7 (b) 5
(c) 6 (d) 8

23. Including proteins, fats and vitamins, which of the following is/are among the major groups of nutrients?
(a) Carbohydrates (b) Minerals
(c) Both of them (d) None of them

24. The type of sugar present in milk is
(a) Lactose (b) Maltose
(c) Galactose (d) Sucrose

25. Of the 20 amino acids that make up Protein, how many are considered essential because the body cannot synthesize them?
(a) 6 (b) 8
(c) 7 (d) 9

26. Inorganic mineral nutrients are required to build body tissues and clotting of blood. In which of the following function(s) they also participate?
(a) Nerve reactions
(b) The contraction of muscles
(c) In the action of enzyme systems
(d) All of them

27. Mineral nutrients are divided into two classes, major elements include calcium, phosphorous, magnesium, iron, iodine, and potassium. Which class includes copper, cobalt, manganese, fluorine and zinc?
(a) Minor Elements (b) Small Elements
(c) Trace Elements
(d) None Essential Elements

28. The food intake and process of eating is regulated by
(a) Medulla oblongata (b) Cerebrum
(c) Hypothalamus (d) Cerebellum

29. In muscular contraction, the direct source of energy is
(a) Creatinine phosphate (CP)
(b) Adenosine diphosphate (ADP)
(c) Nicotinamide phosphate (NADP)
(d) Adenosine triphosphate (ATP)

30. Why vitamin A or also called retinal is essential?
(a) Healthy epithelia tissue
(b) Skeletal growth
(c) Eyesight
(d) All of them

31. Vitamin A is found in the milk, butter and egg yolks. Green leafy or yellow vegetables contain a substance which the body converts to vitamin A. Name the substance?
(a) Carotene (b) Calcium
(c) Cadmium (d) Calciferol

32. Which vitamin is found in human skin and activated with the exposure of skin to sunlight?
(a) Vitamin A (b) Vitamin D
(c) Vitamin C (d) Vitamin K

33. Vitamin D is a crucial factor in calcium metabolism, especially the growth and maintenance of bone. Mention its other name?
(a) Retinal (b) Calciferol
(c) Calcan (d) Calcium Vitamin

34. Deficiency of vitamin D can cause rickets or bow legs. What can be caused by the overdose of this vitamin?
(a) Kidney damage (b) Liver damage
(c) Lungs damage (d) Heart damage

35. In which Vitamin E is found?
(a) Peanuts
(b) Vegetable Oils, Wheat germ
(c) Green Leafy Vegetables
(d) All of these

36. For what vitamin K provides essential cofactors?
(a) For production of white blood cells
(b) For production of Red blood cells
(c) Production of blood.
(d) Production of certain clotting factors in the liver.

37. Vitamin B_1 or thiamine occurs naturally in whole grains, yeasts and nuts. What is its function?
(a) Bone formation
(b) Meat formation
(c) Acts as a coenzyme in carbohydrate metabolism
(d) Helps digestion

38. In hemoglobin, the iron
(a) Is absent
(b) Is present in ferrous form
(c) Is present in ferric form
(d) Is present in both ferrous and ferric form

39. Mention the vitamin that is also a coenzyme, and its deficiency causes lesions of skin, mouth or eyes?
(a) B_1 (b) C
(c) B_2 (d) K

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40. B_{12} or cyano-cobalmin is essential for all body's cells and its deficiency can cause Pernicious anaemia. It occurs naturally in bivalves and fish, eggs and lean meat. Who are at risk of it deficiency?
(a) Rigorous vegetarians
(b) Miners (c) Old people
(d) Children

41. Which of the following enzyme is absent in man?
(a) Cellulase (b) Amylase
(c) Lactase (d) Dipeptidase

42. The phenomenon of thirst is an important function of digestive tract by which
(a) The ionic balance of the body is maintained
(b) The fluid balance of the body is maintained
(c) The electrical balance of the body is maintained
(d) All of the above

43. Which Vitamin is also called Calciferol?
(a) Vitamin (b) Vitamin A
(c) Vitamin K (d) Vitamin D

44. Carbohydrates, found in unrefined grains, tubers, vegetables and Fruit, provide a great part of the energy in most human diets. Although carbohydrates are needed for the body's energy, why they are not considered essential?
(a) Protein can be converted for this purpose.
(b) Protein Fats be converted for this purpose.
(c) Vitamin D be converted for this purpose.
(d) None of these

45. Which nutrient, although scarcer than carbohydrates, provide more than twice energy as compared to carbohydrates?
(a) Minerals (b) Fats
(c) Both of them (d) None of them

46. One gram of carbohydrates gives approximately 4 calories. If consumed in excess then ——
(a) These are released with urine
(b) These converted into fat and stored in the body.
(c) These are stored in the liver
(d) These are stored in the bones

47. Why children require more proteins than adults?
(a) Intake of proteins in children is larger for building strong bones and muscles to create resistance against infections.
(b) To fight against disease
(c) Both of them (d) None of them

48. The stagnant pools are breeding ground of mosquitoes which are carriers of malaria. The larva of mosquitoes grows up in the water and they have come to the surface in order to breath. Which oil's spray on the water provides a thin coating, which helps to eradicate malaria, to prevent larvae to come up to breathe?
(a) Motor Oil (b) Mobile
(c) Machine Oil (d) Kerosene Oil

49. How much blood does a normal person have in his body?
(a) About 4 to 5 litres (b) About 3 to 4 litres
(c) About 2 to 3 litres (d) About 6 to 7 litres

50. Explain the medical term elephantiasis?
(a) Swelling of hands
(b) Swelling of leg or swollen leg
(c) Swelling of Eyes
(d) Swelling of foot

51. What is called a time during which an organism is present in the body before causing disease?
(a) Rest period (b) Incubation period
(c) Sleeping period (d) Incubation time

52. Disease caused by the introduction of germs or virus in human body are called:
(a) Infections diseases
(b) Viral diseases (c) Both of them
(d) None of them

53. In which process the dead germs of another disease in suspension called vaccine in the skin of a man is introduced?
(a) Deracination (b) Sublimation
(c) Presentation (d) Vaccination

54. The process of introduction of the germs of the same disease below the skin to produce the disease in mild form and thus give immunity from a severe attack of same disease is called:
(a) Immunization (b) Vaccination
(c) Incubation (d) None of them

55. What average time is needed for blood clotting?
(a) 2 minutes (b) 4 minutes
(c) 3 minutes (d) 5 minutes

56. Which of the following is the rich source of iron?
(a) Green Vegetables (b) Soya bean
(c) Both of them (d) None of them

57. Name the substance in stomach that is necessary for easy digestion of Proteins?
(a) Bile juice
(b) Sulphuric acid (c) Hydrochloric acid
(d) Hydrochloric Acid

58. Which of these drinks would normally be lowest in sugar content?
(a) Low-calorie squash
(b) High-juice squash
(c) Fruit-flavoured drink
(d) Skimmed milk

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59. Which type of milk is generally lowest in fat?
(a) Full cream (b) Powdered
(c) Dried (d) Skimmed

60. What do you call milk that has been deliberately thickened and fermented by the introduction of Lactobacillus bulgaricus?
(a) Double cream (b) Yogurt
(c) Pasteurized (d) Skimmed Milk

61. If in an operation, if the bile duct is removed the digestion of ——— will be reduced
(a) Carbohydrates (b) Fats
(c) Proteins (d) Both a and c

62. Vitamin B2 is also known as:
(a) Riboflavin (b) Calcium
(c) Calcium (d) Thiamine

63. The protein content of edible portion of eggs is:
(a) 13.3% (b) 14.3%
(c) 15.3% (d) 160.3%

64. Enzymes are
(a) Chemical catalyst (b) Biological catalyst
(c) Organic catalyst (d) Inorganic catalyst

65. Name the organic compounds which are necessary for normal metabolic functions of human body?
(a) Proteins (b) Lipids
(c) Vitamins (d) Fats

66. Which one of the following sweeteners does not provide any energy to the body?
(a) Glucose (b) Fructose
(c) Maltose (d) Saccharin

67. Which one of the following is present to a larger extent by weight in potatoes?
(a) Protein (b) Starch
(c) Water (d) Glucose

68. What is the charring of sugar due to?
(a) Oxidation (b) Reduction
(c) Dehydration
(d) Reduction and hydration

69. What kind of molecules are broken into simple molecules in catabolism.
(a) Large organic (b) Complex organic
(c) Large inorganic (d) Complex inorganic

70. Milk lacks in one important nutrient which?
(a) Calcium (b) Iron
(c) Potassium (d) Protein

71. If one chews an unsweetened chapati for a short time, a distinctly sweetish taste becomes noticeable. This is because
(a) Protein is converted into sugar in the mouth
(b) Carbohydrate is converted into sugar in the mouth
(c) Fat is converted into sugar in the mouth
(d) Vitamins are converted into sugar in the mouth

72. Digestion of fats in the intestines is aided by
(a) Hydrolysis (b) Oxidation
(c) De-emulsification (d) Emulsification

73. Sucrose is dissolved in water due to
(a) Hydrogen bonding
(b) Hydration
(c) Van der Wall's forces
(d) Chemical reaction

74. Carbonated drinks are examples of
(a) Gas in gas (b) Gas in water
(c) Gas in solid (d) Solid in liquid

ANSWERS

1.	B	2.	C	3.	C	4.	B	5.	c	6.	d	7.	a	8.	B
9.	a	10.	d	11.	a	12.	c	13.	d	14.	d	15.	c	16.	c
17.	d	18.	c	19.	c	20.	b	21.	d	22.	c	23.	c	24.	a
25.	b	26.	d	27.	c	28.	c	29.	d	30	d	31.	a	32.	b
33.	b	34.	a	35.	d	36.	d	37.	c	38.	b	39.	c	40.	a
41.	a	42.	b	43.	d	44.	a	45.	c	46.	b	47.	c	48.	d
49.	a	50.	b	51.	b	52.	c	53.	d	54.	c	55.	c	56.	c
57.	d	58.	a	59.	d	60.	b	61.	b	62.	a	63.	a	64.	b
65.	c	66.	d	67.	d	68.	c	69.	a	70.	b	71.	b	72.	d
73.	a	74.	b												

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VITAMINS

1. Which of the following helps in clotting of blood?
(a) Vitamin B_1 (b) Vitamin B_2
(c) Vitamin D (d) Vitamin K

2. Fat soluble vitamins are
(a) Vitamins A,B
(b) Vitamins A, D, E, K
(c) Vitamins A, B, C, D
(d) Vitamins B, C

3. Water soluble vitamins are
(a) Vitamins B, E (b) Vitamins A, B
(c) Vitamins C, D (d) Vitamins B, C

4. Certain bacteria living in human digestive system are beneficial because they synthesise vitamin
(a) D (b) B-Complex
(c) K (d) A

5. Night blindness is due to lack of(PMS 2006)
(a) Vitamin A (b) Vitamin B
(c) Vitamin C (d) Vitamin D

6. Which in our diet promotes bone formation and calcium absorption in our body
(a) Vitamin A (b) Vitamin D
(c) Vitamin B (d) Vitamin C

7. Rickets in childhood occurs due to lack of
(a) Vitamin A (b) Vitamin B
(c) Vitamin C (d) Vitamin D

8. Muscular and nervous disorders is due to lack of
(a) Vitamin A (b) Vitamin C
(c) Vitamin D (d) Vitamin E

9. Citrus fruits are considered rich in Vitamin
(a) A (b) D
(c) E (d) C

10. Vitamin B complex includes
(a) Vitamins B_1, B_2
(b) Vitamins B_1, B_2, B_6, B_{12}
(c) Vitamins B_6, B_{12}
(d) Vitamins B_2, B_3, B_9, B_{12}

11. Deficiency of Vitamin B1 causes
(a) Rickets (b) Skin disease
(c) Beri beri (d) Infertility

12. Deficiency of Vitamin C leads to a disease known as
(a) Scurvy (b) Infertility
(c) Rickets (d) Beri beri

13. Which one of the following vitamins is known as the "anti-sterile" factor?
(a) Ascorbic acid (b) α-tocopherols
(c) Retinol (d) Riboflavin

14. The diet should be rich in which of the following to overcome the deficiency in vitamin D?
(a) Eggs and diary products
(b) Fresh vegetables
(c) Whole grain cereals
(d) Citrus fruits

15. Guava is a rich source of
(a) Vitamin C (b) vitamin D
(c) Vitamin A (d) Calcium

16. Which of the following vitamins is useful in Osteoimalacia?
(a) Vitamin D (b) Vitamin B_{12}
(c) Vitamin A (d) Vitamin C

17. Which of the following is *not* a source of Vitamin C?
(a) Potato (b) Tomato
(c) Guava (d) Milk

18. Vitamins acts as
(a) Ribonucleic Acid (b) Enzyme
(c) Co-enzyme (d) Amino Acid

19. Lack of vitamin D causes which of the following diseases.
(a) Beri Beri (b) Scurvy
(c) Rickets (d) Anaemia

20. Match the following:

Name of Vitamin	Chemical name
A. Vitamin B1	1. Cyanocobalamin
B. Vitamin B2	2. Pyredoxine
C. Vitamin B6	3. Thiamine
D. Vitamin B12	4. Riboflavin

	A	B	C	D		A	B	C	D
(a)	1	3	4	2	(b)	2	1	4	3
(c)	3	4	1	2	(d)	3	4	2	1

21. Which vitamin gets destroyed on heating?
(a) A (b) E
(c) C (d) K

22. Vitamin A is present in?
(a) Liver (b) Milk
(c) Green vegetables
(d) All

23. Cow milk is a rich source of:
(a) Vitamin A (b) Vitamin B
(c) Vitamin C (d) Vitamin D

24. Which Vitamin is known as Ascorbic Acid?
(a) A (b) B
(c) K (d) C

25. Deficiency of vitamin A in man may result in:
1. Short stature
2. Night blindness
3. Colour blindness

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4. Xeropthalmia

(a) 1 and 4 (b) 2 and 4
(c) 1 and 3 (d) 3 and 4

26. The vitamin capable of formation of blood is
(a) A (b) B
(c) C (d) D

27. Milk, cheese and eggs are the source of vitamins?
(a) B and C (b) A and C
(c) C and D (d) A and D

28. Which vitamin is provided by sunlight to the body? (PMS 2006)
(a) Vitamin A (b) Vitamin B
(c) Vitamin C (d) Vitamin D

29. The vitamin which is generally excreted by humans in urine is:
(a) Vitamin A (b) Vitamin D
(c) Vitamin C (d) None

30. The human body needs the following vitamins. Arrange them in the increasing order of their requirement.
1. Vitamin A 2. Vitamin D
3. Vitamin E 4. Vitmain K
(a) 1, 2, 3, 4 (b) 4, 3, 2, 1
(c) 3, 1, 2, 4 (d) 4, 2, 1, 3

31. Healing of wounds is hastened by vitamin:
(a) A (b) C
(c) E (d) K

32. The richest source of vitamin D is:
(a) Cod liver oil (b) Spinach
(c) Milk (d) Cheese

33. Which of the following vitamins is synthesised in the body by intestinal bacteria?
(a) Vitamin B_1 (b) Vitamin B_4
(c) Vitamin D (d) Vitamin K

ANSWERS

1.	d	2.	b	3.	d	4.	c	5.	a	6.	b	7.	d	8.	d
9.	a	10.	b	11.	c	12.	a	13.	a	14.	a	15.	c	16.	a
17.	d	18.	a	19.	a	20.	d	21.	c	22.	d	23.	a	24.	d
25.	b	26.	b	27.	d	28.	d	29.	c	30	b	31.	b	32.	a
33.	d														

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Chapter 5 INFORMATION TECHNOLOGY

BASICS OF INFORMATION TECHNOLOGY

1 A Terabyte represents about
(a) 1 quadrillion bytes (b) 1 trillion bytes✓
(c) 1 billion bytes (d) 1 million bytes

2 Pointing devices are
(a) Mouse (b) Trackball
(c) Touch Screen (d) All of the above✓

3 Video Display Adapters that takes 1024 × 768 pixels are
(a) VGA (b) SVGA
(c) XGA✓ (d) GSA

4 The microphone converts the sound into
(a)Mechanical signals (b) Software
(c) Electrical signals✓ (d) GUI

5 Types of Flat-Panel Display are
(a)LCD (b) EL
(c) Gas-plasma (d) All of the above✓

6 A Digitizer uses a mouse like copying device called
(a) Puck✓ (b) Push
(c) Pop (d) Paste

7 A bit can be
(a) 1 and 0 (b) 1 or 0✓
(c) 1 only (d) 0 only

8 1 byte consist of
(a) 4 bits (b) 8 bits✓
(c) 16 bits (d) 32 bits

9 Data is permanently stored in
(a) Hard Disk✓ (b) RAM
(c) Printer (d) Cache Memory

10 Printer is an example of,
(a) Softcopy (b) Hardcopy✓
(c) Photocopy (d) Nothing

11 Functions can perform by using mouse
(a) Double-click (b) Drag and Drop
(c) Right-click (d) All of the above✓

12 Laser beam technology is used in one of the following
(a) Monitors (b) Magnetic Disk
(c) Optical Disks✓ (d) Mouse

13 The Keys starting with Character F1 to F12 is
(a) Arrow keys (b) Function keys✓
(c) Alphabet keys (d) Numeric keys

14 For printing of large drawings and images we use
(a) Laser printer (b) Plotter✓
(c) Line printer (d) Dot matrix printer

15 Operating System involved by AT&T is
(a) Macintosh (b) Unix✓
(c) OS/2 (d) Windows

INFORMATION NETWORKS

1 A LAN is a combination of
(a) LAN cables (b) Network adapter card
(c) LAN Application Software
(d) All of the above✓

2 On a linear bus topology cabling can be extended by using following device
(a) Network Adapter Card
(b) Barrel Connector✓
(c) Terminator (d) Modem Card

3 The Media Access Control sub layer resides in which layer
(a) Data link✓ (b) Physical
(c) Network (d) Transport

4 Ethernet bus topologies used following Ethernet cabling
(a) Thin Net (b) Thick Net
(c) Bold Net (d) a, b✓

5 How many pairs of computers can simultaneously communicate on Ethernet LAN?
(a) 1 (b) 3
(c) Multiple✓ (d) 4

6 Project 802 defines standards for which layers of the OSI model?
(a) Application and Presentation layers
(b) Physical and Data Link layers✓
(c) Network and Data Link layers
(d) Transport and Network layers

7 Network topologies are categorized into the following basic types
(a) Bus, Ring (b) Star, Tree
(c) Mesh (d) All of the above✓

8 Software to peruse the Internet
(a) Gateway (b) Videoconferencing
(c) Browser✓ (d) Teleconferencing

9 A network that covers small geographic area of single or group of buildings is called
(a) WAN (b) LAN✓
(c) Bridge (d) Gateway

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10 A device which connects multiple nodes to the network is
(a) A modem (b) A Hub✓
(c) A repeater (d) A router

11 What does ISDN stands for?
(a) International Service Data Network
(b) International Service Digital Network
(c) Integrated Service Data Network
(d) Integrated Service Digital Network✓

12 Which one is not network topology?
(a) Star (b) Ring
(c) Circle✓ (d) Bus

13 The CCITT protocol is the same as
(a) X.25✓ (b) Y.25
(c) C25 (d) d25

14 Maximum length of co-axial cable used in LAN is
(a) 120 meter (b) 110 meter
(c) 100 meter✓ (d) 90 meter

15 The cable joining the Hub is called
(a) Spine✓ (b) RS 45 connector
(c) RS 232 serial port (d) Modem card

16 The highest layer of OSI model is
(a) Physical layer (b) Network layer
(c) Presentation layer (d) Application layer✓

17 A network that covers large area, city, country and World is called
(a) LAN (b) WAN✓
(c) Router (d) Bridge

18 If one or more computers are connected to a central Hub, this topology is called
(a) Ring topology (b) Bus topology
(c) Star topology✓ (d) Modulation

19 Which one the common protocols is used for E-mail?
(a) FTP (b) PPP
(c) SMTP✓ (d) POP

20 OSI model has
(a) 11 layers (b) 7 layers✓
(c) 3 layers (d) 10 layers

21 Bandwidth requirement for human voice is
(a) 100000 to 200000✓ (b) 5000 to 20000
(c) 20000 to 30000 (d) 25000 to 50000

22 IEEE 802.3 is
(a) Device Name (b) Protocol✓
(c) Topology (d) None

23 Which of the following is Internet Protocol?
(a) Y25 (b) TCP/IP✓
(c) PCT/PI (d) ITTT

24 Symbol that separates parts of e-mail address is
(a) Σ (b) @✓
(c) $\neq$ (d) =

25 The card which is used for Internet
(a) Network card (b) Modem card✓
(c) VGA card (d) Graphic card

26 A connection of same type of network is
(a) Bridge (b) Repeater✓
(c) Gateway (d) Router

27 SNA stands for
(a) Simple Network Adapter
(b) System Network Architecture✓
(c) System Network Application
(d) Small Network Application

28 The business conducted with the help of computer network is called
(a) E-commercial (b) E-commerce✓
(c) E-communication
(c) Nothing

29 SNA is an example of
(a) De Jure Protocol
(b) De Facto Protocol✓
(c) Network organization
(d) None

30 The most common protocol used in WAN is
(a) Ethernet (b) X.25✓
(c) IEEE (d) ISO

31 Transmit data in the form of light is called
(a) Fiber glass✓ (b) UTP
(c) Color glass (d) None

32 A Search Engine is
(a) A software to search for engines
(b) A device search for motor engine
(c) A website that sells products and services
(d) A website that look through databases for matching criteria✓

DATA COMMUNICATION

1 The transfer of data from one place to another is called,
(a) Data processing (b) Data distribution
(c) Data communication✓ (d) Data encryption

2 Word 16 bits is
(a) 65536✓ (b) 64526
(c) 32526 (d) 34526

3 Coaxial and fiber cables are examples of media
(a) Guided✓ (b) Router
(c) Un-guided (d) Simplex

4 Internal modem is connected to:
(a) DCE cable (b) RJ 45 cable
(c) RS 232 serial port✓ (d) DTE cable

5 Data transmission speed of wire pair is
(a) 9600 bps✓ (b) 9500 bps
(c) 3600 bps (d) 3500 bps

6 Frequency is measured in:
(a) Channels (b) Hertz✓
(c) Bandwidth (d) Baud

7 A set of raw, unprocessed facts, figures and symbols is called:
(a) Information (b) Data✓

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(c) Instruction (d) Code

8 To send data, instruction and information you need a
(a) Sending device✓ (b) Receiving device
(c) Channel device (d) Communication signal

9 An arrangement in which data is transmitted in both directions at a time is called
(a) Simplex (b) Full duplex✓
(c) Half duplex (d) Multi-duplex

10 Analog signal is measured in
(a) Volts✓ (b) Pulses
(c) Hertz (d) WATTS

11 Data is transmitted block by block in
(a) Asynchronous mode
(b) Synchronous mode✓
(c) Communication mode
(d) Satellite mode

12 Microwave and Communication Satellite are examples of
(a) Guided (b) Un-guided✓
(c) Simplex (d) Router

13 The voice channel has a bandwidth of
(a) 0 – 2 KHz (b) 0 – 4 KHz✓
(c) 5 – 10 KHz (d) 10 – 20 KHz

14 Data is transmitted character by character in
(a) Synchronous mode
(b) Asynchronous mode✓
(c) Remote communication
(d) Satellite mode

15 All of the following are Guided Communication media except
(a) Fiber-Optic Cable (b) Wire Cable
(c) Coaxial Cable
(d) Satellite-based,Microwave Communication✓

16 Which of the following cable is comprised of two separate insulated copper wires that are twisted?
(a) Fiber optics (b) Twisted pair wire✓
(c) Coax (d) Submarine

17 Communication between a computer and keyboard involves ——— transmission.
(a) Half duplex (b) Full-duplex
(c) Simplex✓ (d) Automatic

18 The encoding scheme of data represent as
(a) EBCDIC code (b) ASCII code
(c) Unicode (d) All of the above✓

19 The ——— is the physical path over which a message travels.
(a) Single (b) Double
(c) Protocol (d) Medium✓

20 Following devices are used in simplex mode
(a) Radio (b) Television
(c) a, b✓ (d) Multiplexers

21 The characteristics of analog carrier waves are
(a) Binary numbers
(b) Frequency
(c) Amplitude (d) b, c✓

22 A fibre-optic cable consists of tubes of
(a) Mirror (b) Glass✓
(c) Rubber (d) Wooden

23 Wireless modems transmit the data signals through
(a) Air✓ (b) Cable
(c) Gateway (d) None of above

24 An important characteristic of fibre optics is
(a) De-fraction (b) Refraction✓
(c) Transaction (d) None of the above

MICROSOFT WORD

1 Shortcut key for bold font is ,
(a) Ctrl + I (b) Ctrl + B✓
(c) Ctrl + A (d) Ctrl + U

2 Shortcut key to center a paragraph is
(a) Ctrl + J (b) Ctrl + E
(c) Ctrl + L (d) Ctrl + R

3 Which bar contains the name of file
(a) Menu bar (b) Title bar✓
(c) Status bar (d) Scroll bar

4 To subscript a text shortcut key is
(a) Ctrl + =✓ (b) Ctrl + >
(c) Ctrl + ? (d) Ctrl + <

5 Shortcuts for Save as command is
(a) F7 (b) F8
(c) F12✓ (d) F10

6 To change a lowercase letter to uppercase and uppercase letter changed to lowercase select
(a) Bold case (b) Extra case
(c) Toggle case✓ (d) Printer

7 The output of the printer is known as
(a) Copy (b) Hard copy✓
(c) Print out (d) Soft copy

8 Default font of Word 2000 is
(a) Courier New
(b) Times New Roman✓
(c) Impact (d) Arial

9 Shortcut key to open a new document is.
(a) Ctrl + A (b) Ctrl + C
(c) Ctrl + N✓ (d) Ctrl + V

10 Shortcut key to justify a paragraph is
(a) Ctrl + E (b) Ctrl + C
(c) Ctrl + J✓ (d) Ctrl + P

11 The bar which contains the drop down menus is
(a) Menu bar✓ (b) Horizontal bar
(c) Vertical bar (d) Title bar

12 Bullet and Numbering option exist in,
(a) Format menu✓ (b) Edit menu
(c) File menu (d) Insert menu

13 Word count option exist in,
(a) File menu (b) Table menu

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(c) Tool menu✓ (d) Edit menu

14 Shortcut key for replace text is
(a) Ctrl + F (b) Ctrl + T
(c) Ctrl + H✓ (d) Ctrl + R

15 Table option exist in
(a) Format menu (b) File menu
(c) Table menu✓ (d) Tool menu

16 Which of the following is latest version of MS Word?
(a) Word 2000 (b) Word 2007
(c) Word 2013✓ (d) Word 2011

17 Shortcut key to align left paragraph is
(a) Ctrl + R (b) Ctrl + L✓
(c) Ctrl + N (d) Ctrl + K

18 The appearance or shape of character set is called
(a) Symbols (b) Font✓
(c) Bullets (d) Table

19 Shortcut key for a double line spacing is
(a) Ctrl + 1 (b) Ctrl + 3
(c) Ctrl + 2✓ (d) Ctrl + 4

20 Toolbar that contains small pictures is called
(a) Clip art (b) Icons✓
(c) Word art (d) Graph art

21 Save option exist in
(a) Format menu (b) File menu✓
(c) Tool menu (d) Insert menu

22 Ctrl + F2 shortcut is used for
(a) Rename (b) Open file
(c) Page Preview✓
(d) Page setup

23 Red wavy lines under text indicates
(a) Character mistakes
(b) Grammatical mistakes
(c) Spelling mistakes✓
(d) Spelling & Grammatical mistakes

24 Page break dialog box is present in which menu
(a) Format (b) Insert✓
(c) File (d) Table

25. To move the cursor to the end of the document which shortcut key is used?
(a) Ctrl + End✓ (b) Ctrl + Home
(c) Ctrl + F (d) Ctrl + D

26. To move the cursor to the first page of the document which shortcut key is used?
(a) Ctrl + End (b) Ctrl + Home✓
(c) Ctrl + F (d) Ctrl + D

27. To find something in document which shortcut key is used?
(a) Ctrl + End (b) Ctrl + Home
(c) Ctrl + F✓ (d) Ctrl + D

28. To change font of document which shortcut key is used?
(a) Ctrl + End (b) Ctrl + Home
(c) Ctrl + F (d) Ctrl D✓

29. The shortcut key to print documents is

(a) Ctrl + End (b) Ctrl + Home
(c) Ctrl + F (d) Ctrl + P✓

30. Which of the following position is not available for fonts on MS Word?
(a) Normal (b) Raised
(c) Lowered (d) Centered✓

31. You can refresh the Page by
(a) Press Shift + F7 (b) Press Ctrl + F7
(c) Press Alt+ F7 (d) Press F5✓

32. You can Open a New Browser Window by Press
(a) Shift + F7 (b) Ctrl +N✓
(c) Alt+ F7 (d) F7

33. You can Refresh Current Window by Press
(a) Ctrl+R✓ (b) Ctrl+W
(c) Ctrl+H (d) Ctrl+ L/O

34. You can Close the Active Window by Press
(a) Ctrl+R (b) Ctrl+W✓
(c) Ctrl+H (d) Ctrl+ L/O

35. You can Opens the History Window by Press
(a) Ctrl+R (b) Ctrl+W
(c) Ctrl+H (d) Ctrl+ L/O

36. You can Open the Locate or Open Dialog Window by Press
(a) Ctrl+R (b) Ctrl+W
(c) Ctrl+H (d) Ctrl+ L/O✓

37. If you need to hide some paragraphs, how can you do it?
(a) From Paragraph dialog box
(b) From Font dialog box
(c) From Options Dialog box
(d) None of above

38. Changing the appearance of a document is called
(a) Proofing (b) Editing
(c) Formatting✓ (d) All of above

39. In a document what is the maximum number of columns that can be inserted in MS Word Table?
(a) 35 (b) 15
(c) 63✓ (d) 65

40. You can detect spelling and grammar errors by
(a) Press Shift + F7 (b) Press Ctrl + F7
(c) Press Alt+ F7 (d) Press F7✓

41. You can paste the text by Press
(a) Ctrl+A (b) Ctrl+C
(c) Ctrl+X (d) Ctrl+V✓

42. You can Undo Command in word Microsoft by Press
(a) Ctrl+A (b) Ctrl+Z✓
(c) Ctrl+X (d) Ctrl+V

43. You can cut the selected Text by Press
(a) Ctrl+A (b) Ctrl+C
(c) Ctrl+X✓ (d) Ctrl+V

44. You can copy the selected Text by Press
(a) Ctrl+A (b) Ctrl+C✓
(c) Ctrl+X (d) Ctrl+V

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